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JANUARY 2016 • #149

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- ▶ MODIFIED: '69 CHEVELLE L89 396
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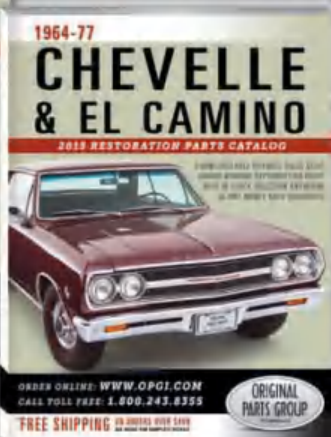
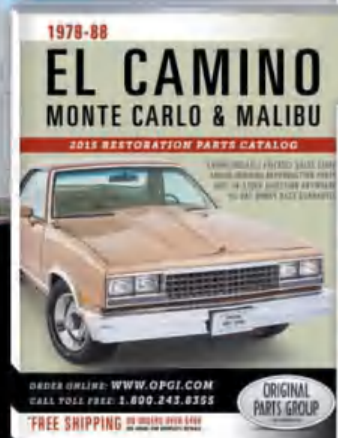
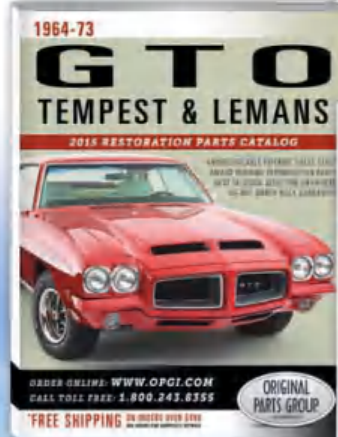
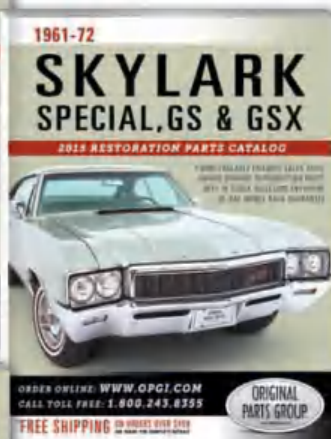
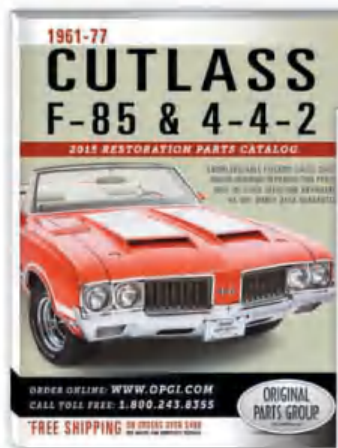
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ON THE COVER

The spectacle of the Pure Stock Drags never disappoints, with staging lanes filled by classic muscle cars that look more like they're lining up to enter an arena show rather than preparing to be thrashed down the quarter mile. Jim Maher's '67 Chevelle is a good example, caught here by Senior Editor Matthew Litwin during his fall pilgrimage to Stanton, Michigan, for the event.

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SUPER COUPON

HFT

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PACK OF 4

LOT 68440/63030
69678 shown

SAVE 64%

\$1.99 comp at \$5.55

Customer Rating

61343650

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SUPER COUPON

VEHICLE POSITIONING WHEEL DOLLY
PITTSBURGH AUTOMOTIVE

LOT 61917 shown
67287/62234

SAVE \$200

\$69.99 comp at \$269.99

Customer Rating

61335738

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SUPER COUPON

CENTRALPNEUMATIC HIGH SPEED METAL SAW

LOT 62541/60568/91753 shown

SAVE 74%

\$12.99 comp at \$49.99

Customer Rating

61371206

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SUPER COUPON

40 LB. CAPACITY FLOOR BLAST CABINET
CENTRAL PNEUMATIC

LOT 62144
68893 shown

SAVE \$170

\$179.99 comp at \$349.99

Customer Rating

61353328

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SUPER COUPON

3/8" x 50 FT. HEAVY DUTY PREMIUM RUBBER AIR HOSE
CENTRAL PNEUMATIC

LOT 69580 shown
61939/62250

SAVE 33%

\$19.99 comp at \$29.98

Customer Rating

61321594

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20% OFF

ANY SINGLE ITEM

Limit 1 coupon per customer per day. Save 20% on any 1 item purchased. *Cannot be used with other discount, coupon or any of the following items or brands: Inside Track Club membership, extended service plan, gift card, open box item, 3 day parking lot sale item, compressors, floor jacks, saw mills, storage cabinets, chests or carts, trenchers, welders, Admiral, CoverPro, Dayton, Diablo, Franklin, Hercules, Holt, Jupiter, Predator, Stik-Tek, StormCat, Union, Vanguard, Viking. Not valid on prior purchases. Non-transferable. Original coupon must be presented. Valid through 3/20/16.

61324383

WOW SUPER COUPON

6500 PEAK/5500 RUNNING WATTS 13 HP (420 CC) GAS GENERATORS
PREDATOR GENERATORS

LOT 68529/69672 shown
LOT 68526/69674 CALIFORNIA ONLY

SAVE \$239

\$449.99 comp at \$689

Customer Rating

61320354

SUPER COUPON

PITTSBURGH AUTOMOTIVE 6 TON HEAVY DUTY STEEL JACK STANDS

LOT 69596
61197/62393
38847 shown

SAVE 50%

\$39.99 comp at \$79.99

Customer Rating

61349448

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SUPER COUPON

4 PIECE ANTI-FATIGUE FOAM MAT SET
HFT

LOT 61607
62389
94635 shown

SAVE 61%

\$6.99 comp at \$17.97

Customer Rating

61336508

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WOW SUPER COUPON

26", 4 DRAWER TOOL CART

LOT 95659 shown
61634/61952

US*GENERAL

Customer Rating

SAVE \$250

\$99.99 comp at \$349.99

61322693

SUPER COUPON

29 PIECE TITANIUM NITRIDE COATED HIGH SPEED STEEL DRILL BIT SET
WARRIOR

LOT 61637 shown
5889/62281

SAVE 76%

\$13.99 comp at \$59.97

61323299

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SUPER COUPON

20 TON SHOP PRESS
CENTRAL MACHINERY

• Pair of Arbor Plates Included

LOT 32879
60603 shown

Customer Rating

SAVE \$215

\$154.99 comp at \$369.99

61324465

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WOW SUPER COUPON

PITTSBURGH AUTOMOTIVE RAPID PUMP® 3 TON LOW PROFILE HEAVY DUTY STEEL FLOOR JACK

LOT 68049/62326
62670/61253
61282 shown

SAVE \$85

\$84.99 comp at \$169.99

Customer Rating

61333392

SUPER COUPON

CENTRALPNEUMATIC 20 OZ. GRAVITY FEED SPRAY GUN

LOT 47016 shown
67181/62300

Customer Rating

SAVE 80%

\$9.99 comp at \$49.98

61335936

SUPER COUPON

POWDER-FREE NITRILE GLOVES PACK OF 100
HARDY

• 5 mil thickness

Item 68498 shown

SAVE 59%

\$6 comp at \$14.97

61354279

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SUPER COUPON

PITTSBURGH AUTOMOTIVE 4" MAGNETIC PARTS HOLDER

Hardware sold separately.

LOT 62535
90566 shown

SAVE 66%

\$1.99 comp at \$5.99

Customer Rating

61381145

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WOW SUPER COUPON

Customer Rating
★★★★★

1.5 HP, 6 GALLON, 150 PSI PROFESSIONAL OILLESS AIR COMPRESSOR
CENTRALPNEUMATIC
LOT 67696 shown
62894/68149/62380/62511

AWARD WINNING QUALITY

SAVE \$49

\$99.99 ~~comp at \$149~~

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WOW SUPER COUPON

FREE

WITH ANY PURCHASE PITTSBURGH 1" x 25 FT. TAPE MEASURE
LOT 69080 shown
69030/69031

\$6.99 **VALUE**

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WOW SUPER COUPON

BADLAND

2500 LB. ELECTRIC WINCH WITH WIRELESS REMOTE CONTROL
LOT 61258 shown
61840/61297/68146

\$59.99 ~~comp at \$259.99~~

SAVE \$200

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WOW SUPER COUPON

TORQUE WRENCHES
"Impressive Accuracy. Amazing Value" - Car Craft Magazine

PITTSBURGH PRO

DRIVE	LOT
1/4	2696/61277
3/8	807/61276
1/2	239/62431

SAVE 60%

Customer Rating
★★★★★

YOUR CHOICE

\$11.99 ~~comp at \$29.99~~

Item 239 shown

Accuracy within ±4%

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WOW SUPER COUPON

Customer Rating
★★★★★

ADJUSTABLE STEEL WELDING TABLE
LOT 61369

32-7/8"
19-7/8"
30"

CHICAGO ELECTRIC WELDING

SAVE \$90

\$59.99 ~~comp at \$149.99~~

NEW

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WOW SUPER COUPON

12" SLIDING COMPOUND DOUBLE-BEVEL MITER SAW WITH LASER GUIDE
CHICAGO ELECTRIC POWER TOOLS

Customer Rating
★★★★★

NEW

SAVE \$264

\$134.99 ~~comp at \$399~~

LOT 69684 shown
61776/61969/61970

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WOW SUPER COUPON

PITTSBURGH AUTOMOTIVE

5 PIECE AUTO TRIM AND MOLDING TOOL SET
LOT 67021

SAVE 66%

\$5.99 ~~comp at \$17.99~~

Customer Rating
★★★★★

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WOW SUPER COUPON

CENTRAL MACHINERY

20 GALLON PARTS WASHER WITH PUMP
LOT 60769/94702/7340 shown

Customer Rating
★★★★★

SAVE \$55

\$84.99 ~~comp at \$139.99~~

61414788

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WOW SUPER COUPON

72" x 80" MOVER'S BLANKET
HaulMaster
LOT 66537 shown
69505/62418

Customer Rating
★★★★★

SAVE 61%

\$6.99 ~~comp at \$17.97~~

61427565

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WOW SUPER COUPON

56", 11 DRAWER INDUSTRIAL QUALITY ROLLER CABINET
LOT 69395/67681 shown
Weights 441 lbs.
3458 lb. Capacity

US & GENERAL

SAVE \$1100

\$699.99 ~~comp at \$1799.99~~

61429447

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WOW SUPER COUPON

6.5 HP (212 CC) OHV HORIZONTAL SHAFT GAS ENGINES
PREDATOR
LOT 60363/69730/68120
LOT 68121/68727 shown
CALIFORNIA ONLY

Customer Rating
★★★★★

SAVE \$228

\$99.99 ~~comp at \$328~~

61438364

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WOW SUPER COUPON

12 VOLT, 10/2/50 AMP BATTERY CHARGER/ENGINE STARTER
CENTECH
LOT 60653 shown
66783/60581/62334

Customer Rating
★★★★★

SAVE 57%

\$29.99 ~~comp at \$69.99~~

61393954

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WOW SUPER COUPON

10 FT. x 20 FT. PORTABLE CAR CANOPY
HFT
LOT 60728/62858/63054
62857/69034 shown

Customer Rating
★★★★★

SAVE \$79

\$119.99 ~~comp at \$199~~

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Old Flame, New Beginnings

Car enthusiasts

have a tendency toward continued acquisition.

For many of us, no matter what we have in the garage (or the barn, backyard, the neighbor's garage, etc.), we keep looking for more. It seems the more a person is

captivated with car lust, the broader his or her interests are, so there's always something new and interesting turning up online, in a car corral, down the street, wherever. An accompanying facet of this sickness is that we also don't like to let anything go, so trading off one car to get another is generally considered an unacceptable option.

I'm certainly this way, but like a lot of us, the realities of life keep me from bringing home any additional strays these days. It's probably good that I got married back when I did, or by now I might be like the car guy equivalent of the crazy cat lady, living in some hovel surrounded by mechanical relics and ducking into the basement whenever the township officials show up to lecture me about ordinance violations. As it is, I've managed to hang on to a few old cars that don't serve any practical purposes, so I'm not complaining. And yet, I keep looking—you know how it is.

So it was with great delight that I recently discovered a way to evoke that rush of glee that comes from dragging home a new project without actually broadening the fleet: I went and reclaimed one of my cars from "paint jail." Even if you're not familiar with that term, you'll likely gather that it's a reference to the extended stays that old cars can tend to have in body shops following estimates that projected having them straight and shiny in no time. It rarely works out that way, and what is initially expected to take weeks or even months often turns into years.

In my case, the shop was not to blame—it was my fault. A friend with a restoration facility was kind enough to help me out with some rust issues that were developing under the vinyl top on my '67 Camaro. The work actually got done fairly quickly, the problem came once it was time to touch up the paint, and talk turned to painting the whole car. I really liked the sound of that, but I just couldn't pull the trigger. Even with good-guy deals, the costs of such projects can mount quickly, especially if stripping the old finish reveals unforeseen issues. Meanwhile, during the time that has passed since I brought my car down there, I've fathered a second child and become a homeowner. I just couldn't commit to the car in the midst of all that.

Lucky for me, my friend was understanding and didn't mind letting my car languish in his place—especially when those months turned into years. Eventually I recognized that I had to get the car back together and get it home, so we moved forward with some touch-up work and finally, the Camaro came home.

After its several years away, having the car back felt a bit like bringing home a new project. That same excitement


kicked in as I crawled all over the car, taking stock of what I'd just landed. But this time, each discovery tapped into the memories that had been shelved as I slipped into an out-of-sight, out-of-mind relationship with the Camaro. I didn't even mind being reminded of all the things that needed attention inside and under the hood when I dropped it off, and instead felt a renewed motivation to get them all sorted.

The Camaro's time away may also have helped me to get over a hang-up I've had with the car as long as I've owned it. When I bought it back in 2000, it was to satisfy a desire to have a running, driving first-generation Camaro so as to fill the void left by the laid-up '69 I've owned since 1985, which had been sitting for about a decade at that point (though it's been revived since then). Once I got behind the wheel of the '67, I was determined to make sure it remained functional. As a result, I left it with much of the equipment it came with, like the 327 engine. It had always run so well, I never wanted to disturb it. Even the guys in the shop it sat in started calling it the "miracle car," in honor of its ability to start right up and idle smoothly with two pumps of the pedal, regardless of how many months it may have sat dormant.

But that engine, as trusty as it has been, is a pooch. Its output is right where it ought to be, confirmed on a dyno some years back, but as sexy as the 327 displacement sounds, in two-barrel form, it's just not very exciting. Adding a four-barrel and dual exhaust years ago helped, but not enough.

I actually built a nice 350 for the car years ago, but couldn't bring myself to install it, for fear I'd somehow upset the mechanical balance of its universe and ruin its ever-ready attitude. The 350 is relatively mild, spec'd with the intention of serving as an everyday driver, but it made nearly 400 hp on an engine dyno and produced a fat torque curve that starts low in the RPM range and just keeps going—it's probably fairly similar to a current GM Performance ZZ-series crate engine. It should really wake up the little Camaro without compromising its usefulness.

There are other aspects of the car that should have been tended to but were not, all due to the same compulsion. But I think my time away from the Camaro has broken me of that somewhat neurotic hands-off behavior. For those years it was away, I got no use from it, no matter how reliable it may have been. Now, with that feeling of having a fresh project, I think it's time to dive in.

Another friend of mine recently sold off a really nice Road Runner that he'd owned since he was a teen in high school 30 years ago. He has other classic cars he's acquired more recently, and when he sold the Road Runner, he cited having "lost his connection to the car" as the reason. I didn't get it then, but I may be starting to understand—the passage of time with no interaction can have that effect. But, I'm also finding that revisiting a familiar old mount may actually be better than starting over. We'll see what emerges from my garage come spring. 

“It seems the more a person is captivated with car lust, the broader his or her interests are, so there's always something new and interesting turning up.”

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LATEST PONY OFFERS ALTERNATIVE FOR PERFORMANCE FANS

The build-up to Ford's next-generation

Mustang started percolating well before the new model was actually unveiled, and now that it's been a production reality for a solid season, most accounts hold that the latest Pony car is indeed a step forward. For performance fans, the familiar 5.0-liter "Coyote" V-8 engine returns, now making 435 hp and 400-lb.ft. of torque in the Mustang GT and still available with a six-speed manual gearbox. But among the powertrain choices rolled out for 2015 was a curveball: a turbocharged four-cylinder slotting between the base V-6 and the GT's V-8.

For some reason, the announcement of a turbo four-cylinder Mustang still has the power to raise eyebrows among Mustang devotees, even though this is familiar territory. Mustang got its first four-cylinder for 1974 and its first turbo for '79, though perhaps the most serious turbo-four effort of the past was the SVO, debuting for 1984.

Parallels between the SVO and the EcoBoost are hard for longtime fans to resist, and at first blush there would appear to be many similarities. Both presented as performance offerings, yet both touted improved fuel economy. Both offer manual transmissions (in the SVO it was a mandate; the new car can be had with an automatic), limited-slip differentials with performance gearing, improved braking and handling, upgraded seating and more.

Granted, while the SVO carried those fea-

tures as standard fare, many of them are extra on the new car. The EcoBoost engine package itself is not actually treated as an option—Ford lists this model as the "I4 Coupe" on the window sticker, though on the company website it is referred to as the "EcoBoost Fastback." The particular model we tested had the Premium trim level, and those two elements combine to yield this car's \$29,395 base price; you can get into an EcoBoost Mustang for less if you avoid the Premium trim—they start at \$25,395, while the V-6 entry-level Mustang starts at \$23,895.

Our test subject was optioned with the Eco-

Boost Performance Package (\$1,995), which includes 19-inch "summer" tires mounted on Ebony Black aluminum wheels, 3.55:1 rear gearing with limited-slip, an "Engine Turn" instrument panel face with extra gauges for boost and oil pressure, plus upgraded brakes and radiator and a larger rear anti-sway bar. Oddly, that package also includes rear spoiler delete—a sharp contrast to the SVO's somewhat unique two-tiered rear spoiler. The upgraded seating also carries a premium on the new car, where the optional Recaros add \$1,595 to the sticker.

Back in 1984, the SVO was presented as a more enlightened approach to performance, using a smaller yet more sophisticated engine package with increased efficiency to provide a more nimble, spirited driving experience. While the SVO reached 205 horsepower from 2.3 liters, the new EcoBoost Ti-VCT I4 touts 310 from the same displacement and far more sophistication, including direct injection and Twin-independent Variable Cam Timing (that's the "Ti-VCT" bit).

Given the EcoBoost Mustang's attributes, expecting a rewarding experience on the road would seem reasonable, yet from the very first drive, it was apparent that this was a very different approach to performance than the more traditional V-8. The first thing you're likely to notice is a lack of that turbo "feel," the surge of power that follows a momentary lag in uptake. Instead, the EcoBoost engine's power delivery





is much more linear, as is the case with many contemporary turbo engines. Eliminating lag should be seen as a good thing, but here, it leaves the Mustang feeling a bit flat in the lower RPM range. In fact, after some in-town driving, we felt compelled to get out on an open road to see just where the rest of those 310 horsepower were hiding.

Not surprisingly, this engine likes to rev, but even heavy pedaling doesn't yield much of a kick in the pants, though an eye toward the speedometer will confirm that velocity does indeed build somewhat rapidly under a heavy foot. We found that after getting familiar with the car, some of its sweet spots became more apparent. But get caught in the wrong gear at the wrong speed and you're going to be made to wait. Though the EcoBoost Performance Package boasts 3.55 gears, it really feels like the 3.73s offered with the V-8 could help here.

There's no question that you're driving a different kind of Mustang when behind the wheel



The new Mustang's sporting interior is made even more track-ready with the addition of optional Recaro seats. EcoBoost engine makes 310 hp using almost the same configuration and displacement as the SVO of the '80s. Performance package adds boost and oil pressure gauges.

of the EcoBoost model. The power delivery and soundtrack make that clear. The EcoBoost's improved economy over the V-8 might help to make it seem a more practical choice, and we did find that a tank of fuel seemed to last a good long time, but really, modern V-8 Mustang fuel consumption isn't all that terrible.

If you're reading this magazine, you like American V-8 powered machines, and if you're thinking about a new Mustang, the EcoBoost option is probably not going to satiate your desires. Ford's Coyote is so good, it's well worth the extra coin, both at purchase time and at the pump. 🍂





FORD MOTORSPORTS

1964 SHELBY DAYTONA COUPE TO KICK OFF SIMEONE MUSEUM PRESERVATION WORKSHOPS

The 1964 Shelby Daytona Coupe carrying chassis number CSX2287 is historically significant for many reasons: It was the first of just six examples built; it was the only one constructed entirely at Shelby's Venice, California factory; it racked up 23 speed records at Bonneville; and it remains the sole

Daytona Coupe still in cosmetically unrestored condition. On December 12, 2015, the Shelby will star in the Simeone Museum's inaugural Preservation Workshop.

CSX2287, once owned by record producer Phil Spector, was out of the public eye from the late 1960s until its 2000 acquisition by the

Simeone Foundation. As purchased, the car suffered from decades of neglect, and in 2007 the Simeone Foundation Automotive Museum began a mechanical restoration of the Shelby that would leave its external appearance largely unaltered.

Displayed at the foundation's Philadelphia museum and exercised at the occasional Demonstration Day, the Daytona prompted a lengthy debate on the Hemmings Blog about preservation versus restoration with both Dr. Fred Simeone and the car's designer, Peter Brock, chiming in on the subject. Expect the topic to be raised again at the Preservation Workshop, which is scheduled to begin at noon on Saturday, December 12. For more information, visit SimeoneMuseum.org. — *Kurt Ernst*

GREAT RACE OFFICIALS ANNOUNCE THE 2016 CITIES

When Great Race and Coker Tire

Company owner Corky Coker announced that the 2016 Hemmings Motor News Great Race presented by Hagerty would travel along the historic Lincoln Highway, there was much speculation about the potential sights along the California-to-Illinois trek. Would it pass the Bonneville Salt Flats? Mount Rushmore? The Badlands? All that speculation has finally come to an end, as the Great Race has announced the complete list of city stops for the 2016 run.

Registration and inspection will begin on June 16, 2016, in San Rafael, California. The Great Race's traditional preliminary event, the Hagerty Trophy Run, will be held on Friday, June 17, and will start and finish in San Rafael. Teams will depart the city the next morning to begin the 2016 Great Race, with a lunch stop in Vacaville followed by an overnight stop in Old Sacramento.

Other overnight stops include Reno, Nevada; Elko, Nevada; Evanston, Wyoming; Cheyenne, Wyoming; Rapid City, South Dakota; Sioux Falls, South Dakota; and Cedar Rapids, Iowa. The race will conclude on Sunday, June 26 in Moline, Illinois, and as is the case every year, the exact route will be a closely guarded secret until each leg begins.

For more information, including a list of cities visited for lunch stops, visit GreatRace.com. — *Matthew Litwin*



FORD MOTORSPORTS

INTERNATIONAL DRAG RACING HALL OF FAME ANNOUNCES 2016 INDUCTEES

In the world of quarter-mile competition, one of the greatest honors a racer can receive is enshrinement in the International Drag Racing Hall of Fame, affiliated with the Don Garlits Museum in Ocala, Florida. The hall of fame just announced its Class of 2016 inductees, seven true luminaries who include, very atypically, a driver from outside North America.

This year's American driver inductees include Preston Davis of Bartlett, Tennessee, best known as the pilot of the *Tennessee Bo-Weevil*; Jack Doyle, a successful New England drag racer who ran everything from Gassers to Top Gas dragsters; Marvin Miller, one of three partners who fielded the Warren-Coburn-Miller *Ridge Route Terrors* dragster; Mark Oswald, a major star in both Top Fuel and Funny Car who's now the co-crew chief for Antron Brown's Top Fuel car; and Gas Ronda, a star of the 1960s who made the transition from Super Stockers to F/Xers to flip-top Funny Cars.

Dennis Pridle, unofficially known as the Don Garlits of Great Britain, is also among 2016 inductees, as is Steve Earwood, former NHRA national director of communications and the current owner of North Carolina's Rockingham Dragway. — *Jim Donnelly*



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Based right here in Vermont, Replicarz has been doing some amazing things in the past couple of years, from reviving some long-discontinued diecast models to coming up with a new line of historic Indy replicas. Now, they've begun a new series of land speed record cars in 1/18th-scale cast resin, led by two of the all-time greats. They're both versions of the Challenger 1, the piston-powered car in which Mickey Thompson became the first American to exceed 400 MPH in 1960, and this, the revised version of the car that appeared in 1962, and now resides in the NHRA Museum.

To us, this is a hugely significant competition car. When you open the box and gaze at it in its display case, you're immediately stunned by the fidelity and quality of its paint and lettering. Trust us, it's dead on. Replicarz has also re-created amazingly accurate castings of the record-setter's huge magnesium wheels and ultra-high-speed tires, only they're partially hidden under the skirting that was added to the 1962 car. And since the body is a one-piece resin casting, nothing opens. You can barely see the steering wheel inside the cockpit and nothing at all of the four Pontiac engines that powered the salt streaker. Don't get us wrong, it's a gorgeously executed model. It just left us wanting a little more.

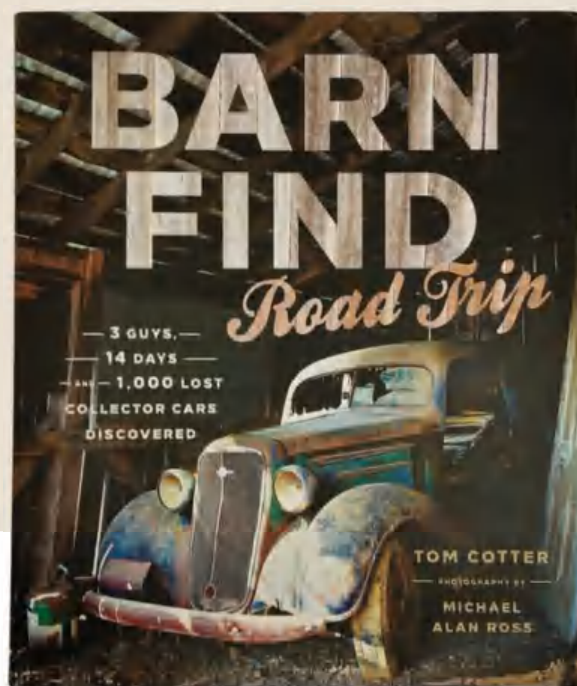


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Do you have a long-ago, or even more recent, outing that you can honestly describe as your best ever? The author and photographer of this evocative volume certainly do. They jumped into a traditionally rodged 1939 Ford woodie wagon and started cruising the Southeast, stopping here, stopping there, always on the hunt for vintage tin. Boy, did they find it! After a couple of weeks on the road, Cotter—a guy who has a dog-like sense of smell when it comes to ferreting out old cars—had discovered more than a thousand automobiles, many in original condition, stored in barns and other hideaways.

Cotter's an unchallenged expert at this, having written numerous anecdotal books on barn finds, but this one recounts his own, personal scavenger hunt. In 192 pages, with strong photography, the team describes locating everything from an in-the-leaves 1966 Dodge Coronet R/T to a 1946 Buick rocker-dragger custom to a 1940 American LaFrance aerial ladder truck. The stories behind them are as diverse and entertaining as the vehicles themselves. It's an uplifting read.



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By Jim Donnelly and Jeff Koch

Photography by Jeff Koch

“I’m kind of a paperwork junkie. One of the first things I ask about a car is whether they have the paperwork and history. If they don’t, I just walk away.” That’s one of the recurrent themes when this 1987 Buick Grand National is being discussed by its owner. Here’s another one: “I’m a car guy. I love all cars.” And there’s the thing about the force-fed V-6 Buick muscle cars in general: Tom Kelly loves them. He’s had a variety of them over the years, and he admits he let them go. Not this time.

There’s a special air to this Grand National hardtop. It was built in 1987, the final year of Buick’s audacious experiment in redefining the American performance car. Really, the roots of the Grand National can be traced all the way back to the early 1960s, when General Motors experimented with turbocharged power for the Oldsmobile F-85 and the Chevrolet Corvair Monza. Buick got into the game around the same time, offering a V-6 in the 1962 Special, the first American production car so powered.

GRAND FINALE

After a brace of Buick Grand Nationals, the last edition's the keeper





During its lifespan, the Grand National became ever brawnier. A relocated turbocharger with air-to-air intercooler arrived in 1986, and by the following year, rated horsepower was up to 245. Small wonder that this was a gotta-have performer by the late 1980s.

The stakes were upped in 1978, when it offered a turbo version of its 231-cu.in. OHV V-6 with two or four-barrel carburetion in the Regal Sport Coupe, the basic template for the future Grand National. The concept was later expressed through the Regal T-Type, which mixed in alloy wheels, a Gran Touring suspension and fast-ratio power steering. The Grand National nameplate first appeared in 1982, but only 215 examples were built, though most were naturally aspirated V-6s. The model then went on a one-year hiatus before reappearing with turbocharged power in its now-familiar sinister raven-black guise between 1984 and 1987.

To say the absolute minimum, these were unorthodox interpretations of the basic muscle concept. Buick had blended a boulevardier mid-size G-body, with squarish 1980s GM themes inside and out, with a radical way of generating horsepower. No matter, because the Grand National, fully capable of running with a Corvette, rapidly established itself as one of the baddest boys on the block. In 1986, the power equation was augmented by the addition of an air-to-air intercooler that could chill the incoming intake charge, adding 35 horsepower. In 1987, new engine management controls further increased the engine's output to 245 hp. The buyers responded, ordering 20,193 examples of the Grand National in 1987, both its best sales year and its

last, as GM retired the G-body in favor of a front-drive, W-platform Regal for 1988. The explosively powerful Grand National still commands a huge enthusiast following to this day. Problem is, a lot of them were raced competitively, which means they were modified to varying degrees. Finding one that's completely stock is the exception.

That's where Tom comes into this story. He found the car in the Midwest, but in keeping with his commonplace drill, wanted to know its full history. And the seller complied. This Grand National was sold new in Frostburg, Maryland, to a gentleman named Fred Robeson, delivered in July, 1987. Fred and his son were looking to buy another pumped-up G-body, the Chevrolet Monte Carlo SS, when his son, Steve, told him he ought to look at the Grand National, given that it was about to go out of production. One of the things that enthralled Fred after doing some research was that the Grand National could be optioned with a power Astrorof, but cars so expensively equipped were hard to find. Through a dealer search, they finally located one at Arnold Palmer (yes, that Arnold Palmer) Motors in Latrobe, Pennsylvania.

It was a loaded car, lacking only the G80 Limited-Slip differential. Fred grabbed it. He decided to add a limited-slip differential; still a 3.42 rear, which was assembled by an automotive center in Frostburg.

Fred owned the car for years, giving it to Steve in 1995, who owned it until 2012. Steve lives in Berryville, Virginia, where he just retired as a schoolteacher. He sold it to a local dealer, which resold it to a Florida retailer through a dealer auction. The next owner was Larry Holtz, who lives in Marion, Iowa. That's where Tom, who lives in Mesa, Arizona, located it. He was ecstatic at its shape. That's what he means when he's talking about the importance of tracking down a car's full history.

"What's amazing about the car is that it's still all original paint," Tom told us. "It's original factory paint and it's in incredible shape. I didn't believe it. I told myself, there's no way this is original paint, but I guess the Virginia climate saved it. I've had four of these, and none of them were this good. But I found an inspection sheet that confirmed it. Larry, the fellow I bought it from, had talked to the original owner. There's a lot of paperwork in the file, including the original Arnold Palmer window sticker, and there's also some information from Applied Technologies Research, which did some of the interior work on the Grand Nationals, an envelope from them with Fred's name on it. So I have all that. I got Steve's name and phone number from Larry and called him. His father had passed away in 2012. This is how I tracked everything down."

Here's a fact worth noting: Over about the last 40 years, Tom has owned something like 150 cars,



eight or 10 at a time, stored in an airplane hangar that he shared with another collector. "I love cars, period. All of them. I'm not partial to any make or marque. It wasn't that I was wealthy; I'd had two or three at a time, then sell them to buy more. I've had 50-plus station wagons over the years. I also have a 1970 4-4-2 W-30 with 19,000 miles on it and a 1969 Toronado. I just love them. The progression is, you sell something to buy something. Now, I buy them to keep them."

The Grand National now has about 75,000 original miles. In keeping with his penchant for in-depth research, Tom verified that the Limited-Slip rear wasn't ordered on this car. That's a big deal, be-

cause it's a snap to induce turbo-boosted wheelspin on any Grand National with an open rear. Yet he said that's not that unusual. "I've had four of these now, and two of them didn't have Limited-Slip. You had to order it as an option." Tom found out by decoding an option tag located inside the trunk lid, which verified that G80 was not included in the factory assembly, but as he said, "It's got a Posi in it now, so I'm fine with it."

Jeff Koch, our west coast editor took the Grand National for a test drive... "Slip inside, and beyond the built-to-a-price stalks, buttons and fixtures, it's surprising how tight it feels. You sit more upright than you might have in an earlier-



The Grand National was always an incongruous mix of Buick traditionalism and hold-your-breath performance. An 85-MPH speedometer was standard, but ridiculously pessimistic. The graphic tach isn't prominently placed, but is still useful.



OWNER'S VIEW

I guess that I just like performance cars, especially sinister-looking ones. That's why I love the Grand National. I've had friends who've owned them, and owned T-Types, and it was basically the last of the factory hot rods until very recently, when they started coming out with all this tremendous horsepower. Remember, in 1987, there was nothing that could touch these things. I just really like the 1980s looks of them. They're not a lot of money, not terribly expensive to buy, and they're certainly collector cars. People still love them. This one isn't modified. I'm a stock guy; an originality freak. I mean, putting a chip into it is one thing, because you can always take it out and put the factory chip back in it. I wouldn't want to modify it because it's going to affect its value. — **Tom Kelly**



If you're like us, you really enjoy that once-feared "Turbo-6" emblem on the polished wheels' center caps. Buick took an innovative path to power with turbocharging.

era performance car, but the cloth seat feels narrow and flat, the B-pillar crowds your left shoulder, and the sporting console eats up a tremendous amount of knee room. The sunroof, rare option though it is, does cut into headroom—and its mechanicals make labored grinding noises when you try to pull the panel open. Look outward: The hood itself seems wider than it does long, the only angle from which it performs this particular trick. The hood bulge, so wicked on the outside, barely registers from the cabin.

"Things get a little better at the controls and gauges: The T-Type

wheel is nice and fat in the hand, there's a tach of sorts (lighted bars, rather than a sweep needle), and the knee-slapper of an 85 MPH speedometer. Twist the key and the V-6 alights, its rorty exhaust cluing you in to the potential of what's happening under the hood, idle set at 1,000 RPM (more or less, depending on a flickering light in the tach). We go out to hunt the unsuspecting.

"Actually, we can't. Really, who these days doesn't suspect? The Grand National screamed with a whisper even when it was new, thanks to the Darth Vader-spec black-on-black paint scheme, and it was an open secret that in its day, it could spank many of its contemporaries with little issue. In this modern era of sculpted aerodynamic forms, the Grand National stands out even more, with its shovel-nosed-brick profile. Nearly three decades on, it's a performance legend, as much as big-blocks and Hemis were in the Nineties, when those cars were also 30 years old. So no one on the mean streets of Phoenix was caught unaware, and no one wanted to mess about. Alas..."

"Power brake it, and the tires only let loose when you reach boost. And when you do let go, man, it's not at all what you expect from a traditional muscle car. Your standard big-incher is all torque, throwing you back in your seat and inducing whiplash, as steam-locomotive torque and gearing issues translate into grip during launch. The speed comes, but it's that initial punch in the gut that so

often moves muscle car fans. With the Buick turbo, the cubes aren't there, so building up a little boost off the line is necessary for a good hard launch. Let off the brake, and you're not slammed back in your seat so much as you are gently pressed back, held in place as if by an unseen hand reaching out of the windshield as the power piles on. The turbo needs revs to work, which is helped by the 3.42 rear, and the boost is all in by 2,800 RPM. Rev it clear through to red-line, don't let go, and the feel of power is sustained; it just doesn't get you there in the manner to which big-cube purists are accustomed. There's a big "sssssh" from the wastegate when you finally lift off the gas; it's as if the car is whispering conspiratorially in your ear, suggesting you not tell anyone about the absurd fun you two get up to, lest they catch on. In a straight line, the Grand National is a scream.

"In corners, however, you may be screaming for different reasons. The tires grip well enough and the steering feels hefty, but the narrow track and tall body doesn't plant you in corners with the sort of determination you'd expect of a car with 20 years on more traditional muscle. And the Grand National is starting to feel its age in everyday driving situations. The seats don't help—the gray cloth keeps you in place, and is perfect for hot climates like Phoenix, but there's little thigh or lumbar support to help keep you upright in the turns. Hit a bump, and rather than isolating you from the road (or better still, letting you feel that it's there), the whole car shudders around you. Those who like to go around corners and enjoy their boost have to look to Pontiac, and the 1989 Turbo Trans Am Indy Pace Car replicas, to have that particular itch scratched."

Regardless, Tom is proud of his mean piece. "The nice thing about the Grand National is that it's a car that you can use, with air conditioning and such. I've had two '86s and two '87s. One day, I took one out to Firebird Raceway on a warm evening—just wanted to see what it would do. I got in line, made a run; ran a 14.3-something. I get my time slip and head back and realize I had the air conditioning on the whole time. It still made a good run." 🍀



1987 BUICK GRAND NATIONAL

245 HORSEPOWER @ 4,400 RPM

355-LB.-FT. TORQUE @ 2,000 RPM

1/4-MILE: 14.7 SECONDS @ 95.1 MPH*

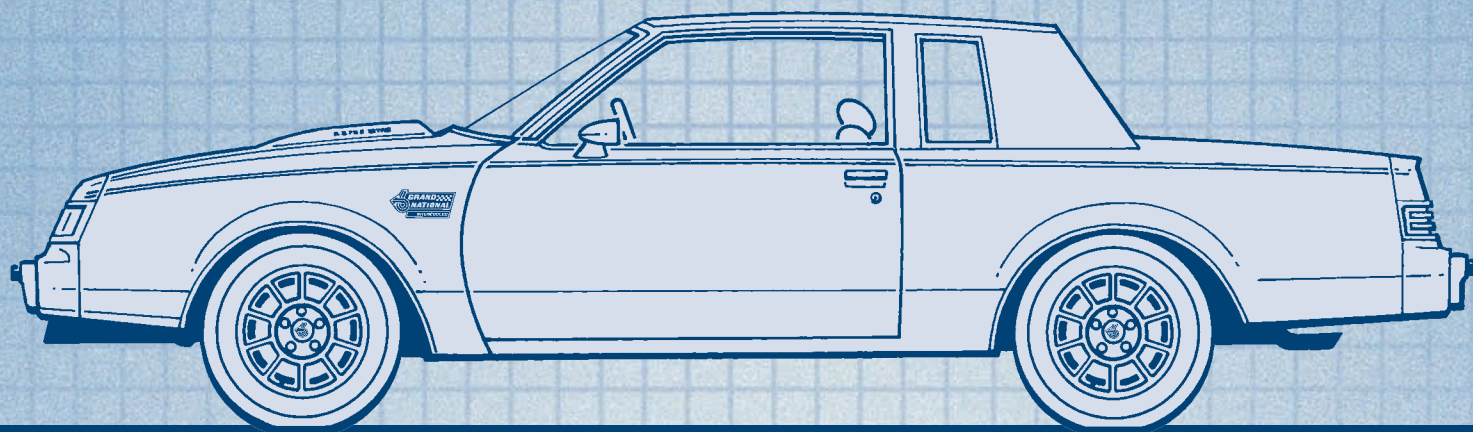


ILLUSTRATION BY RUSSELL VON SAUERS

SPECIFICATIONS

PRICE

Base price	\$11,562
Price as profiled	\$17,930
Options on car profiled ...	Grand National package, \$3,574; Astrorooft, \$925; Delco-GM cassette stereo, \$354; power door locks, \$145; power windows, \$210; tinted glass, \$120; delay wipers, \$55; rear defogger, \$145; cruise control, \$175; tilt steering wheel, \$125; tungsten halogen headlamps, \$25; power antenna, \$70

ENGINE

Type	Buick OHV even-fire V-6, cast-iron block and cylinder heads
Displacement	231 cubic inches
Bore x stroke	3.80 x 3.40 inches
Compression ratio	8.0:1
Horsepower @ RPM	245 @ 4,400
Torque @ RPM	355-lb.-ft. @ 2,000
Valvetrain	Pushrod, hydraulic valve lifters
Main bearings	Four
Fuel system	Buick/Bosch sequential fuel injection, Garrett T-3 turbocharger, air-to-air intercooler
Lubrication system	Full pressure
Electrical system	12 volt
Exhaust system	Single outlet from turbocharger to catalytic converter; Y-pipe to transverse dual-in/dual-out muffler, dual tailpipes

TRANSMISSION

Type	General Motors Hydra-Matic THM-200-4R four-speed automatic
Ratios	1st 2.74:1 2nd 1.57:1 3rd 1.00:1 4th 0.67:1 Reverse 2.07:1

DIFFERENTIAL

Type	GM 8.5-inch 10-bolt axle with Positraction
Ratio	3.42:1

STEERING

Type	Saginaw recirculating ball, power assist
Ratio	13.97:1
Turns-to-lock	3.6
Turning circle	34.1 feet

BRAKES

Type	Dual-circuit hydraulic, GM Powermaster electric power assist
Front	10.5-inch disc
Rear	9.57-inch expanding drum

CHASSIS & BODY

Construction	Perimeter frame with additional cross member, welded steel body
Body style	Two-door, five-passenger coupe
Layout	Front engine, rear-wheel drive

SUSPENSION

Front	Independent, upper and lower control arms, coil springs, anti-roll bar, Delco tubular gas shock absorbers
Rear	Live axle, upper and lower trailing arms, coil springs, anti-roll bar, Delco tubular gas shock absorbers

WHEELS & TIRES

Wheels	Styled chrome-plated alloy
Front	15 x 7 inches
Rear	15 x 7 inches
Tires	Goodyear Eagle GT steel-belted performance radials
Front	215/65R15
Rear	215/65R15

WEIGHTS & MEASURES

Wheelbase	108.1 inches
Overall length	200.6 inches
Overall width	71.6 inches
Overall height	54.5 inches
Front track	58.5 inches
Rear track	57.8 inches
Curb weight	3,400 pounds

CAPACITIES

Crankcase	5 quarts
Cooling system	12.68 quarts
Fuel tank	18.1 gallons
Transmission	11 quarts

CALCULATED DATA

Bhp per cu.in.	1.06
Weight per bhp	13.87 pounds
Weight per cu.in.	14.71 pounds

PRODUCTION

In 1987, Buick produced 20,193 Grand Nationals.

PERFORMANCE*

0-60 MPH	6.0 seconds
1/4-mile ET	14.7 seconds @ 95.1 MPH

*Source: Motor Trend, August 1987



**MUSCLE MACHINES
CAR FEATURE**

HAIL TO THE CHIEF

*Not liking this red, white and blue Trans Am
would simply be un-American*

Words and photography by Thomas A. DeMauro



Though styling, powertrain choices and options are significant when purchasing any muscle car, its color combination can sometimes also make or break the deal. Be it fair or unfair, the truth is, certain combos are generally easier to sell and can fetch more cash than an identically equipped model featuring a less popular hue.

It can be a serious issue for some collector cars, but there are others that are simply born with an eye-catching color combination, and 57-year-old Tony Boccuti's '74 Trans Am is one of them. Its red, white and blue palette instantly tugs at the heartstrings of many Americans, including its owner. "You just don't see white cars with a blue bird and

red interior!" he says. "Though odd to some people, more seem to like it than don't... and I love it."

The Glenside, Pennsylvania, resident tells *HMM*, "I've been a car person for as long as I can remember. Growing up through my teenage years and well into my 20s, my friends and I always had our 'cool' cars and our everyday cars."

Tony began to recognize a troubling trend as those in his peer group grew older, however. They were getting married and selling their "cool" cars to put the proceeds toward the new necessities of married life—home, children, furniture and appliances, etc.





The current owner relates that the 250-hp 455 D-port engine in this Trans Am is original and has yet to require a rebuild. He had the newer A/C components installed to get the system functional. The "HO" decal, which was not used in 1974, was added by a previous owner.

Concerned that the same fate would befall him, in 1984 he purchased a Buccaneer Red '74 Trans Am as an insurance policy for his Sterling Silver '76 T/A, which he had owned since 1977 and had even driven to the movie theater to see *Smokey and the Bandit* when it was first released. He rationalized that by having two Trans Ams, hopefully, only one would have to be sacrificed following his own wedding.

Soon after he married his girlfriend, Cyndi, in 1987, the inevitable conversation arose. As Tony had hoped, the resulting compromise was the couple sold the '74 and kept the '76. The trappings of matrimony were procured and the newlywed Boccutis still had a stylish Trans Am in which to cruise.

Ultimately, the '76 was sold in 1994 when Tony began to dabble in

Corvettes, but by 2006, he felt the need to relive his youth and drive the tires off of another mid-'70s T/A. Remembering the fun they had in their previous Pontiacs, Cyndi echoed his sentiments. In August, he found this 70,000-mile example in the sales section of the PY On-line Forums.

"It had all the 'good' items I was looking for," he recalls, "a 455-cu.in. engine and tilt wheel, and it was the last year for dual exhaust, the Turbo 400 transmission and the small back window."

The seller, Colton Smith, purchased the T/A out of North Dakota in the late 1990s. He said that he actually bought it sight unseen, and flew up from central Texas with a cashier's check and the intention of driving it home. After paying for the Pontiac, he headed South

with a pair of pliers, a screwdriver and a flashlight as his only tools. Fortunately, the only hiccup during the trip came when a battery cable connection vibrated loose in North Texas, so the Trans Am wouldn't start. Once that was tightened up, it made it the rest of the way home without any issues.

Colton related that the T/A had been repainted before he bought it, and the only major work he did while he owned it was to replace the incorrect rear end that was in it with the proper 3.08-geared, Safe-T-Track-equipped 10-bolt.

"Everywhere I took it people loved it," he said, but by 2006, Colton's children were nearing college age, so the T/A had to be sold. If you've priced a college education lately, you can easily understand why.





He didn't want the prized Pontiac to simply become flipper bait, so he carefully vetted prospective buyers. "After speaking with me and learning that I have loved T/As since the early 1970s," Tony explains, "he knew I was the 'right' next owner."

When the Pontiac was delivered from Texas, Tony confirmed that the photos didn't lie. The previous owners had indeed taken good care of the T/A. A fact-finding drive confirmed its original optional L75 250-hp 455 engine ran strong, the Turbo 400 shifted precisely and the replacement 3.08 Safe-T-Track rear end made no untoward noises.

The 455 even has factory-installed HEI, which first became available partway through the 1974 model year. It would be standard on all Pontiac V-8s in 1975.

Over the years, the \$57 250-hp L75 455 option has been over-

shadowed by the rare and highly collectible \$578 290-hp "round-port" LS2 Super Duty 455. True, the L75 did spot 40 hp to the SD at the same 4,000 RPM. However, its 380-lb.ft. of torque was only 15-lb.ft. shy of the SD's 395-lb.ft., and it peaked at a stump-pulling 2,800 RPM, 400 RPM lower than its higher-performance sibling. Though the purpose-built SD was certainly more powerful, the L75 was no slug and compared well with most of the remaining big-cube offerings from the competition.

The L75 was the latest version of the big-valve D-port-cylinder-head-equipped 455 that was introduced as an option for the 1970 GTO with a 10.0:1 compression ratio and rated at 360 horsepower. Variations were available in the Grand Prix and full-size models. Over the four model years that followed, however, to enable the engines to run on unleaded

regular fuel, the compression ratio decreased to 8.2:1 and then 8.0:1 (by increasing combustion chamber size), which, of course, reduced horsepower.

Beginning in 1971, SAE net power ratings were provided alongside the gross power ratings by some manufacturers. They differed in that net ratings were derived from dyno testing engines equipped with the accessories employed when mounted in the car (air cleaner, alternator, model-specific full exhaust system, etc.) to provide a more accurate representation of its power. In 1971, the L75's gross rating was 325 hp, and its net rating was 255 hp in the Firebird and 260 hp in the GTO and Grand Prix. In '72, net power ratings became the standard, and the L75's was 250 hp.

For 1973, the EGR emissions system was introduced and the exhaust valve size was also reduced

The red interior retains its original dash pad, lower door panels, console, steering wheel, Rally gauges, radio, seat belts and trim. Options added later in life include the 8-Track player, power trunk release (actuating button in the glovebox) and the rare rear seat console.

OWNER'S VIEW

After having the '76 and '74 Trans

Ams when I was younger and dating Cyndi, it brings back fond memories every time I get behind the wheel of this '74. Cyndi and I still do "date nights" with it sometimes. I would tell anyone looking to purchase a muscle car, not to buy the first one they see, but to buy the one that's in the best condition they can afford. Also, decide what you intend to do with it first. You don't want to buy a trailer queen if you plan on driving it a lot, and you don't want a rust bucket if you plan on bringing it back to a 100-point car. These are exciting cars, and driving them is half the fun! — *Tony Boccuti*



to 1.66-inch from 1.77, yet the 250-hp rating held fast and also carried over to 1974.

In the beginning of the 1975 model year, no 455s were offered in a Trans Am or any Firebird. At about mid-season, a package was put together that featured a 455, four-speed and 3.23 Safe-T-Track rear. However, a drop in compression ratio to 7.6:1 by increasing combustion chamber volume again and tightening emissions standards that included the introduction of the catalytic converter, which negated dual exhaust, reduced output to just 200 hp at 3,500 RPM and torque to 330-lb.ft. at 2,000 RPM. This made the '74 the last year of the more powerful 250-hp 455s.

Radial Tuned Suspension was new for 1974 and came standard on the Trans Am. Its presence was announced by an emblem affixed

to the glovebox door (in later years, it was on the instrument panel). The system consisted of specific spring rates, shock valving, bushing firmness and front and rear anti-roll bar sizing to best exploit the ride and handling characteristics of the T/A's standard GR70-15 radial tires. In the case of the Firebird and Trans Am, among those changes, the rear anti-roll bar was actually reduced in size. For the T/A, it was to .812-inch from the previous years' .875. The front bar remained at 1.25 inches.

Tony's test drive also concluded that the RTS suspension still provided secure handling, but could use new shocks. The brakes worked as they should, and even rattles and squeaks, both hallmarks of this era's Trans Am, were minimal. Deeming the body and its previous Cameo White repaint and replacement graphics as good to go, over the

next several years, he concentrated on turning the clock back three decades in the engine compartment, interior and trunk.

To enhance the 455's growl, a new and larger 2.5-inch-diameter exhaust system with a pair of Flow-master mufflers was installed, and Tony bolted in a set of Koni Classic shocks to improve wheel control and spring dampening over road imperfections.

He reinvigorated the interior by installing a new carpet, seat covers, upper door panels and headliner from Classic Industries. Since some principal parts of the A/C system were missing under the hood, Tony decided to have a modern, smaller and lighter compressor from Classic Auto Air installed along with a condenser, and to convert the system to R134a. The chipped and worn wheel spoilers were replaced with reproductions and painted and installed by Reutters Restoration Inc. in Lansdale, Pennsylvania. "I like to do all the work myself, but the A/C and spoilers were the only two tasks I couldn't do," Tony laments.

His original intent when he bought the T/A was to drive it, and drive it he does. "Turn the key and it starts right up," he says. "The stock 455 gets off the line really well for a heavy car, and the torque makes up for any horsepower shortcomings. It stops well and cruises the open roads with very little wind noise. It's not bouncy or mushy over bumps. Handling is surprisingly tight and flat, and there's enough torque to power out of a curve."

As you may imagine, Tony's in the driver's seat regularly, weather permitting, be it attending local cruise-ins and shows or taking long rides. He even drove the T/A 600+ miles in a weekend when he ventured to the Trans Am Nationals in Dayton, Ohio, in 2007. He concludes, "I'm not afraid to take it anywhere."

Wearing its national colors with pride, Tony's T/A is a prime example of a pulse-quickening weekend driver that didn't require a second mortgage to purchase, restore or maintain. In fact, it's not perfectly restored, and there's some minor road rash here and there, but it's important to note that it was all earned where the T/A was meant to be enjoyed most, carving up back roads while plastering an ear-to-ear grin on its enthusiastic owner's face. 🍀

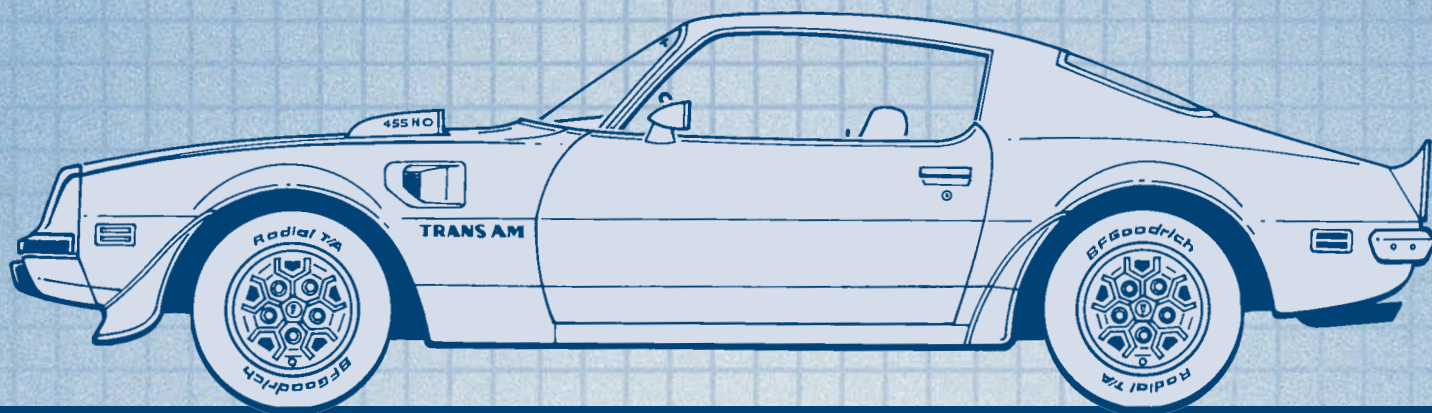
The 15 x 7 Honeycomb wheels, which were an option for '74, were added by a previous owner, as this T/A was originally equipped with the standard 15 x 7 Rally II wheels.



1974 PONTIAC TRANS AM

250 HORSEPOWER @ 4,000 RPM

380-LB.FT. TORQUE @ 2,800 RPM



SPECIFICATIONS

PRICE

Base price	\$4,445.75
Price as profiled	\$5,480.75
Options on car	Custom trim, \$77; AM radio, \$65; tilt steering wheel, \$45; Soft Ray glass, \$38; GR70-15 white-letter radials, \$33.60; 455 four-barrel engine, \$57; console, \$58; hood decal, \$55; A/C, \$446

ENGINE

Block type	Pontiac OHV V-8, cast-iron block
Cylinder heads	D-port, "4X," 2.11/1.66-valves
Displacement	455 cubic inches
Bore x stroke	4.15 inches x 4.21 inches
Compression ratio	8.0:1
Horsepower @ RPM	250 @ 4,000
Torque @ RPM	380-lb.ft. @ 2,800
Camshaft type	Hydraulic lifters, 273/289-degrees duration (advertised), .410/.414-inch lift
Induction system	Pontiac cast-iron, dual-plane manifold, Rochester Quadrajet four-barrel carburetor, stock AC mechanical fuel pump
Ignition system	GM HEI distributor, stock replacement wires
Oiling system	Stock oil pump, windage tray and oil pan
Exhaust system	Log-type manifolds, dual exhaust with single crossflow muffler, bright tips (currently 2.50-inch H-pipe, twin Flowmaster 40 series mufflers, 2.50-inch tailpipes, bright tips)

TRANSMISSION

Type	GM Turbo Hydra-Matic 400, three-speed automatic
Ratios	1st 2.48:1 2nd 1.48:1 3rd 1.00:1 Reverse 2.08:1

DIFFERENTIAL

Type	GM 8.5-inch 10-bolt housing with Safe-T-Track differential
Ratio	3.08:1

STEERING

Type	Saginaw power-assist
Ratio	Variable 15:1 to 13:1
Turns-to-lock	2.41
Turning circle	38.9 feet

BRAKES

Type	Hydraulic, power assist
Front	11-inch disc
Rear	9.5-inch drum

CHASSIS & BODY

Construction	Partially unitized with bolt-on front subframe and bolt-on steel body panels
Body style	Two-door coupe
Layout	Front engine, rear-wheel drive

SUSPENSION

Front	Unequal-length A-arms, coil springs, tubular shock absorbers, 1.25-inch anti-roll bar
Rear	Longitudinal multi-leaf springs, .812-inch anti-roll bar, tubular shock absorbers

WHEELS & TIRES

Wheels	15 x 7-inch Rally II, stamped steel (currently 15 x 7 Honeycomb, Polycast fascia over stamped-steel)
Tires	GR70-15 white-letter steel-belted radials (currently 255/60R15 BFG T/As)

WEIGHTS & MEASURES

Wheelbase	108.0 inches
Overall length	196.0 inches
Overall width	73.4 inches
Overall height	50.4 inches
Front track	61.7 inches
Rear track	60.4 inches
Shipping weight	3,655 pounds
Curb weight	3,762 pounds

CAPACITIES

Crankcase	6 quarts with filter
Cooling system	21.3 quarts
Fuel tank	21.5 gallons
Transmission	9 pints (pan)
Rear axle	4.25 pints

PRODUCTION

For 1974, 10,255 Trans Ams were produced and 4,648 were equipped with the 455-cu.in. D-port engine, which was only offered with the automatic transmission.

PERFORMANCE*

Acceleration	N/A
0-60 MPH	N/A
1/4-mile ET	N/A

*Source: No 1974 Trans Am 455 (non-SD) road tests could be found.

1969 Dodge Dart GTS

By Mike McNessor

Photography by Matthew Litwin • Restoration photography provided by Sam and Aaron Hall

Few can say they've restored a '60s muscle car in the last 20 years using nothing but original factory parts, purchased when these coveted bits were still available from the dealer.

The rest of us would trade limbs or an entire family member for a stash of impossible-to-find original hardware just sitting in reserve waiting its turn to shine. Imagine, whenever you needed a part, you'd just liberate it from its factory packaging and bolt/screw/glue it on.

That more or less describes how Sam Hall restored this 340-powered 1969 Dodge Dart GTS, which he bought new and has owned ever since. The retired Chrysler dealer parts manager from northern Indiana pored over his parts catalogs back in the 1970s and with Nostradamus-like vision, requisitioned everything he thought he'd ever need to keep his Dart flying.

The only mistake Sam made? Not ordering even



more genuine Mopar stuff when he had the opportunity. "In the mid-1970s, after I put the car in storage, I went through the 1969 parts book and I tried to order every component part that I thought I would ever need if I restored the car," Sam says. "Unfortunately, I didn't order enough. But it was the easiest restoration anyone could ever ask for. When I was putting the car back together, I could go over to the shelf and grab a new piece to replace an old, worn-out one. Especially valuable were things like the factory roof-rail weatherstripping and the door weatherstripping and the trim molding. I really didn't order enough, but I still had everything there that I needed to put the car back together."

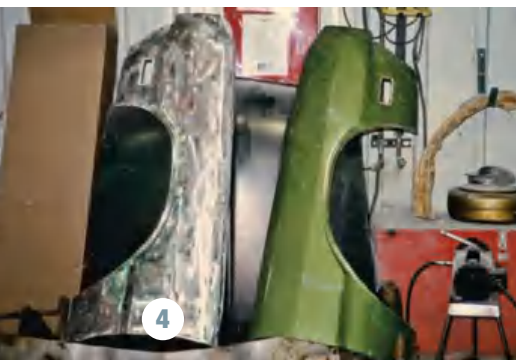
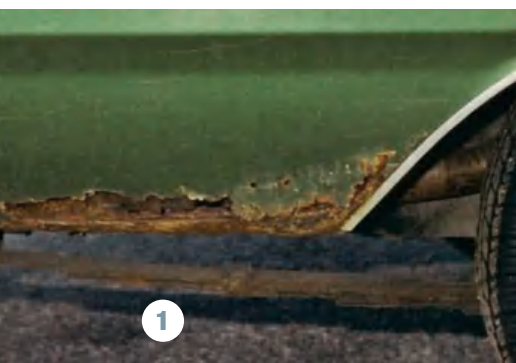
Sam bought his Dart GTS at Swope Motors in Louisville, Kentucky, for \$3,721.25 in February 1969 and took delivery of the car in March. "I was going to school in Louisville, living with my grandparents and working a side job. I saved up enough for a deposit and paid off the car in 18 months."



Prior to the Dart's restoration, it was road worthy and had made journeys to two Mopar Nationals, but an older repaint was showing its age.



✂ RESTORATION PROFILE



1. Rust on the Dart's body was minimal and the only serious damage was behind the right rear wheelhouse. **2.** The radiator support had been damaged in an earlier accident and straightened. **3.** With the car completely stripped, it was possible to correct all of the front end tweaks that hadn't been addressed in the 1970s. **4.** The Dart's restoration was a side project at 14/69 Auto Body in Fort Wayne, Indiana, so the body

was perched on a snowmobile trailer to make it easier to roll around as necessary. **5.** The sheetmetal was stripped with a combination of D-A sanding and hand sanding. The front fenders are original, but the hood was replaced with a used part because the original had been straightened previously. **6.** The chassis hard parts, suspension pieces, brake hardware and more were media blasted.

Ordering the car was almost as easy as pointing to the Dart GTS featured on the factory brochure, which happened to be F5 Medium Green Metallic with a black vinyl top. That very brochure listed a TorqueFlite automatic as standard issue with the GTS package, but Sam wanted his car built with a four-speed manual and he also wanted to eliminate the bumblebee stripe on the tail.

As these things go, the car was built with the stripe, but Sam took it anyway and started driving it—a lot. “I went all over the state (Kentucky) with the car,” he says. “Between the time I took delivery and just before Christmas of that year, it had over 20,000 miles on it. I later moved to Fort Wayne, Indiana, and started working at a Chrysler-Dodge dealership, going to school nights and working days, so it was my daily driver.”

An accident when the car was just a few months old damaged the hood and right front fender, so the Dart was repainted, sans the posterior stripe. “I asked the salesman for stripe delete, so when we painted the car in 1970 we took the stripe off and it hasn't been there since,” Sam says. “My son says I ought to put the stripe on it but I like it the way it is. When it's his car, he can do what he wants with it.”

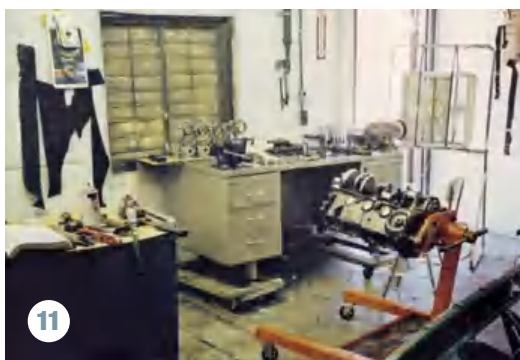
Sam met his wife, Karen, while working at the dealership and she drove the Dart for a few years after they were married in 1971. But by 1975, the car wasn't being used regularly and its market value had plummeted. “In 1973-'74, during the first fuel crunch, the car wasn't worth anything, maybe \$300-\$400,” Sam says. “That upset me—I was driving a dealership demonstrator and I didn't need the car, but I didn't want to give it away, so I put it in the garage. It sat in storage until the summer

of 1994. I moved it from garage to garage, pushed it on and off trailers but it wasn't started until 1994.”

The push needed to get the Dart back on the road came as a bet from a friend, who wanted to see the car on the field at a popular gathering of the Chrysler faithful. “A very good friend of mine, Dick Rose, of Fort Wayne, Indiana, is the original owner of a 1969 Charger. His car is all original, it's never been painted or wrecked. We went to the Mopar Nationals in 1993, and he said, ‘You know, next year the 25th anniversary of ‘69 cars is going to be recognized. You've got to have your car there.’ I thought it sounded like a good challenge, but I put it off and put it off and put it off. Well, on a Friday, about a week before the nationals, my friend showed up at my parts counter giving me guff about my car not being ready,” Sam says.

“That day I ordered tires, exhaust and anything else I might possibly need, knowing that Monday I could return all of it. I went home and uncovered the car and put the battery from my garden tractor in it. I tapped the starter and saw the crankshaft move. I knew that as long as it wasn't seized, it would start. I loaded it onto a trailer and brought it to the dealership. Four or five of my friends showed up on Sunday morning and we took the car apart as far as we dared and put it all back together with fresh parts: belts, hoses, and we cleaned the fuel tank. By Sunday evening, we had the car running, and I drove it to the Mopar Nationals that Thursday to win the bet.”

While the Dart was as roadworthy as ever, its repaint after the accident, more than 20 years prior, was showing its age. “It really looked pretty sad,” Sam says. The primer was showing through the paint, and the acrylic enamel that we'd cleared over was cracked.”



7. After priming, the chassis parts were hung from the shop's lifts and sprayed black using enamel paint. **8.** The body was etched, primed then treated to several rounds of priming and block sanding. Here the hard-to-paint surfaces were sprayed prior to the rest of the car being painted. **9.** The backsides of the panels were painted lying flat in the booth then the fenders and doors were reattached to the car for the final finish.

10. After installing the vinyl top, the chassis and suspension pieces were reattached and new OEM bushings installed. The shocks and the idler arm were also replaced. **11.** The 340 block was tanked, honed and the original pistons went back in their bores with fresh rings. The camshaft used was a Mopar Performance stock replacement. **12.** The Dart got a final checkup on the alignment rack to make sure it was flying straight.

Still, the Dart made it back to the Mopar Nationals in 1995, before Sam embarked on a complete body-off restoration later that same year. "In the winter of 1995-'96, we started ripping the car apart and it went back on the road in June of 1998," Sam says. "It made it back to the '98 Mopar Nationals in Columbus."

Sam handled all of the disassembly and reassembly work himself. With the guidance of Mark Beckstedt and the crew at 14/69 Auto Body in Fort Wayne, Indiana, he even tackled some of the body work. "I did some of the body work because I knew all of the guys at the body shop—it was a side job for them; they'd work on it nights and Saturdays. They'd show me what to do and they told me that there wasn't anything I could screw up that they couldn't fix," Sam says.

After the car's trim, glass, interior and chassis parts were removed, the Dart's body panels were laid bare using a combination of D-A and hand-sanding. "The body was completely stripped except the inside—we didn't strip the floorboards or anything like that. It was a factory rust-proofed car and we didn't disturb any of the factory rust proofing under the car," Sam says.

There was very little rust repair needed, only a patch on the lower right rear quarter panel behind the wheelhouse opening, but the teardown gave Sam an opportunity to have some of the accident damage more thoroughly fixed. "When it was wrecked, it tweaked the radiator support and it was never right, so here was the chance to straighten the radiator support and straighten the frame a little bit," he says. "It was close but we wanted to do it correctly."

After the metal work was finished, the body was shot with self-etching primer followed by multiple applications of high-

build primer and hours of block sanding. "I've heard many comments about how straight the car is," Sam says. "Even though it was finished back in 1998, the car has survived very well."

The Dart was painted by Brian Rice with Sikkens two-stage urethane in a modern shade that closely replicated the factory Medium Green. "The original spare tire had never seen sunlight and the wheels were painted body color, so we matched the spare tire to a Sikkens paint chip," Sam says. "The original fender tag under the hood of the car has never been painted, and if you compare it to the fender it's screwed down to, it's a match."

All of the Dart's chassis hard parts and the rear axle were media-blasted, then refinished with a few coats of primer and black enamel. "The idler arm was changed, as were the shocks and all of the rubber bushings, but it still has the original torsion bars and leaf springs. The replacement Mopar suspension pieces I bought back in 1975-'76, so they sat on shelves until 1997," Sam says. "There's an advantage to never throwing anything away."

The Dart's 340 engine was sent to C and P Machine Shop in Fort Wayne, Indiana, where it received a minimal amount of machine work and new parts. "When the car went into storage, it had about 58,000 miles on it. I took the engine apart and sent it to the machine shop, but the machinist recommended just honing the cylinders and reinstalling the old pistons with new rings and bearings," Sam says. "There were a few valves that were borderline, so we did a valve job on it and replaced the valves as necessary. The water pump has been changed, but the rest of the accessories are original."

When the car was restored in the 1990s, Sam decided against taking the A833 four-speed gearbox apart, but after piling on



The Dart's interior needed new carpet and front seat upholstery as well as a headliner, but everything else inside is original to the car. It's been driven about 20,000 miles since its two-plus-year makeover was finished back in 1998.



OWNER'S VIEW

Sam Hall's one-owner 1969 Dart

GTS 340 has always been a dependable driver, both before and after its restoration 20 years ago. The retired Chrysler parts manager can recall only one time that the car suffered a breakdown on a road trip, and that setback was easily fixed with the help of a Good Samaritan, who happened to be a fellow Dodge enthusiast:

"In 1998, when we first got the car back together, I made another bet with my friend, who said it wasn't going to make it to the 1998 Mopar Nationals (at National Trail Raceway in Columbus, Ohio). We worked until late the night before and hit Highway 30 the next morning, traveling in a group going 75-80 MPH. I heard a loud noise from under the hood and thought, oh no. I coasted to the side of the road and looked under the hood. There was no oil running out, but sure enough, it was down a cylinder.

"One of the guys towed me about three miles to St. Marys, Ohio, and left us at a Shell gas station — my son and another friend were there. I pulled the right-hand-side valve cover and saw that a pushrod had broken through a rocker arm — the most gorgeous thing I'd ever seen, because I knew I could fix that. Then this old Ford pickup truck pulled up and the driver asked, 'You boys need help?' I said, 'Yeah, we need a rocker and a pushrod for a Chrysler small-block.'

"He said, 'How many?'

"Turned out he used that old Ford truck to pull a Dodge race car; he came back with a dozen rocker arms and a half-dozen pushrods, and within an hour, I was back on the road."



with factory wheel opening moldings, but the car doesn't have them now. They're something I didn't order enough of back in the 1970s and I never found a full set of originals. They make reproductions now, but I'm probably not going to put them on."

In addition to assembling the Dart's chassis, its 340 engine and handling the rebuild of the transmission and rear axle, Sam performed all of the interior restoration work. "The front seats have been reupholstered with Legendary covers and the carpet is also from Legendary," Sam says. "The rear seat is original and

the door panels are original. The headliner was replaced, but the dash pad, all of the gauges and the instrument panel are all original. This was my first headliner installation—it was a pain, and it took me about three attempts to do it. It was tedious so I'd work on it for a little bit and I knew when it was time to walk away."

In the 18 years since the car has been finished, it's been on a trailer only once and even tackled the 3,500-mile Hot Rod Power Tour in 2011.

"The only time it was trailered was last year when we took it to the Carlisle Chrysler Nationals. We were going to be on the road for three or four weeks and I didn't want the car sitting outside that long. I've driven it to Florida, to Detroit, it's been to the Mopar Nationals a dozen or more times. We put it back together to drive." 🍌

more than 20,000 miles since, he recently decided it was time for an overhaul. The axle, too, received an update in 2013 that entailed new bearings and a new limited-slip differential.

"At the time, there was no reason to take the transmission apart, but now the car is approaching 80,000 miles," Sam says. "Last winter, when my wife and I retired, I was bored out of my mind, so I pulled the engine and transmission out of it. I put some new gaskets in the engine and rebuilt the transmission with new synchronizers. The synchronizer between one and two was worn out, and the transmission would jump out of second gear once in a while. I also put new bearings in it, but no new gears."

The exterior trim on the car is largely original, though the bumpers were sent out for chroming and the original wheel opening moldings were deemed too rough to replace. "It came

1969 DODGE DART GTS



The Dart's 340 shines in what looks like fresh Hemi orange paint, but its internals and accessories are mostly original. Though the owner had ordered the car new without the rear "bumblebee" stripe, it came on it anyway, so he opted to leave it off when he restored the car. Rallye wheels were added in 1994.



1973 Buick Riviera Stage 1

By Matthew Litwin

Photography by Jim Donnelly and Matthew Litwin

At first glance, it may seem counterintuitive to celebrate the personal luxury cars of the 1960s and '70s in a journal dedicated to high-performance muscle cars. Those plush, leviathan coupes would appear to have been more focused on luxury than speed, but closer examination reveals that muscle car drivetrain packages were often offered in the more upscale models as well. While the muscle car was aimed at the youth market, the personal luxury coupe of the period could have been optioned to become a super car for grown-ups.

If you need proof of the existence of the personal luxury car's sinister side, look at Ford's Thunderbird, the very car often credited with creating the market segment. Its early iterations offered dual-quad or supercharged versions of the 312-cu.in. V-8, and not long after, dual-quad 390 "big-block" engines were

available. Such leanings would continue to surface in Pontiac's Grand Prix, the Chevy Monte Carlo and of course, Buick's Riviera. Well equipped from the start with the 325-hp "nailhead" 401, the "Riv's" muscular potential was wrung out with the availability of a 340-hp 425 that was supplanted by a dual-quad, 360-horse 425 a year later. Complemented by a factory suspension upgrade, the same engine option became part of the extra-cost GS package for '65. The horsepower race—even in the personal luxury car market—was on! In its basic form, performance Riviervas continued through the mid-Seventies.

In previous issues of *HMM*, we've discussed the go-fast virtues of the 1965-'67 Riviera GS, and this month we're going to focus on the 1973 Stage 1. It's both rare—fewer than 2,000 were built—and polarizing,



ILLUSTRATION BY JUDI DELL'ANNO

ENGINE

Although the Riviera was offered with a 250-hp version of Buick's 455, the 1973 edition was unique. Buyers could obtain the more powerful Stage 1 engine—at 260 horses—without spending extra cash on the GS option, which was a Ride and Handling package.

BRAKES

Although detuned for a number of reasons, the Stage 1 of '73 had enough torque to push a 4,500-plus pound Riviera through the timing traps near 15-seconds flat. Stopping that force were power front disc brakes coupled with rear drums.

TRANSMISSION

For obvious reasons, manual transmissions installed in personal luxury cars were a relative rarity. Luxury meant driving ease and thus a three-speed Turbo Hydra-Matic 400 automatic was standard in every 1973 Riviera, even the sporty Stage 1 editions.



Who would have guessed a 1973 Riviera Stage 1 could shake it up at the drag strip? Managing sub-15-second E.T.s in this luxury machine was a reality with some tuning and a gear change. Buick's chromed Road Wheels give it a muscle car vibe, and the grille-mounted Stage 1 engine callout is hard to miss.



INTERIOR

This is one area where the "personal" aspect of the personal luxury car comes into play, thanks to the wrap-around control panel that housed everything—save the glovebox—within easy reach of the driver's fingertips.

CHASSIS

Keeping torque from the Stage 1 engine glued to the pavement was Buick's independent front and coil-sprung rear suspension systems that were mounted to a perimeter frame. To get heavy-duty components, buyers also had to order the GS option separately in '73.

BODY

Although similar in design to the 1971-'72 version, the '73 Riviera was both the longest (223.4 inches) and heaviest (nearly 4,500 pounds) up to that point, thanks in no small part to new low-speed-crash regulation, which also had the effect of refining the body lines.



thanks to its Bill Mitchell designed boattail styling. Today, the Riviera Stage 1 is also comparatively affordable, offering collectors on a budget an alternative that maintains muscle car heritage. Even in the detuned realm of 1973, the Stage 1 Riviera recorded 0-60 times in less than nine seconds—quite a feat for a luxury car weighing more than two tons. If you're intrigued by its luxurious performance, here's a few details you should know.

ENGINE

In spite of the civilized overtones Buick's 1973 Riviera conveyed, its base engine was the 455-cu.in. V-8, the same displacement used for all Rivieras since 1970. However, for 1971, Buick's 455, like most of GM's engines for that year, was detuned to accommodate the use of lower-octane fuels, followed by a second round of power loss a year later, this time attributed to both testing methods (with air cleaners and mufflers installed) and the switch from gross to net ratings. This meant that by '73, the standard 455 employed by the Riviera was rated at 250 net hp. Compared to the 370 gross horses of 1970, it must have seemed dismal for gearheads.

We've mentioned the base engine only as a point of reference, since the Riviera Stage 1 was not

Above, left:
Filling the void between the inner fender wells is Buick's 455-cu.in. Stage 1 engine, which added \$139 to the Riviera's sticker price. It came with a still-stout 260 hp and a chromed air cleaner lid; chrome ribbed rocker arm covers were available at the dealer, as were engine decals.

Above, right:
A Rochester Quadrajet four-barrel fed the big V-8, helping it produce a healthy 380-lb.ft. of torque when needed.

a sub-model, but rather a \$139 performance upgrade (code A1). As with all Stage 1 engines, more performance was derived thanks to a specific camshaft, heavy-duty valve springs and oversized valves (2.12/1.75-inch intake/exhaust valves versus standard 2.00/1.625-inch valves). A deep-sump fuel pump was included as well. Equipped with a Rochester four-barrel carburetor, the engine was rated for 260 hp and 380-lb.ft. of torque.

What to watch for: Not all Stage 1 engines were created equal. Those designed for the Skylark-based GS 455 featured an entirely different camshaft profile, enlarged oil suction pipe and a specific carburetor and distributor—among other bits—although the head design and short-block dimensions were identical to those on the Riviera's version.

Visually, the Riviera's Stage 1 engine was spruced up with a chrome air-cleaner lid without an engine call-out decal. That said, an engine dress-up kit was available over the counter, which included decals and chromed ribbed rocker-arm covers. Also, in hindsight Buick made it possible for collectors to confirm whether or not a '73 Riviera was factory equipped with the Stage 1: Look at the fifth character in the

VIN, which should be a "W."

Our feature car, owned by Clark Lumsden of Dixon, Illinois, is a good example of how a well-tuned example can perform. A documented Stage 1 Riviera, it was restored to OE standards—with the exception of a .030-inch overbore, 2.50-inch exhaust and 3.42:1 final drive ratio—and at the 2014 Pure Stock Muscle Car Drags (see coverage from 2015 on page 40) was able to record a quarter-mile time of 14.546 @ 93.42 MPH. Aftermarket upgrades to the 455 beyond the PSMCD rules are possible, which can further unleash the engine's potential, to say nothing about reverting to 1970 OE configuration. Whether stock or altered within reason, the engine is known for durability, even under stress.

TRANSMISSION

In spite of the Stage 1 engine, the Riviera was still a luxury car, which meant that the typical market buyer preferred power without fuss. Buick, therefore, supplied all Rivieras—regardless of engine choice—with a Turbo Hydra-Matic 400 automatic (THM-400). In standard configuration, the unit was shifted on the column; however, a center-console option would bring with it an "L"-shaped shifter in a more sporting location between the front occupants.

What to watch for: GM's THM-400 is very well known for being an exceptionally durable unit when properly maintained. Of course, after years of use and possible abuse, even the THM-400 can suffer, but it's not a major concern. These units are easily serviced, and parts are readily available even for a complete overhaul should the need arise.

1973 BUICK RIVIERA STAGE 1

CHASSIS

Along with the visual redesign of the 1971-'73 Riviera came a new chassis. Eliminated was the cruciform-style foundation, replaced by a conventional perimeter design that allowed engineers to better fit a new four-link, coil-sprung rear suspension system, supported by GM's standard independent front coil-sprung suspension. The changes, in turn, stretched the Riviera's wheelbase from 119 inches to 122, longer than any previous generation. Also included were power steering and power front disc brakes, along with 15 x 6-inch steel wheels furnished with a choice of wheel covers and HR70-15 radial tires. This basic architecture remained in place through 1973.

Unique to the 1971-'73 Rivieras was MaxTrac. Roughly a \$100 option, it was an electronic wheelspin-control package developed by the AC Spark Plug Division, consisting of a disc mounted on the left-front wheel hub with a sensor that monitored wheel speed. A second sensor, mounted on the transmission, interconnected with the speedometer drive, a solid-state electronic controller and an on/off switch. It was also connected to the ignition and brake switches, brake lamp and ignition system. When in operation, the controller compared sensor inputs and would intermittently interrupt the ignition system when the driven sensor at the transmission indicated a higher speed than that of the front wheel. MaxTrac could be manually switched off, enabling a driver to "rock" a Riviera out of difficult situations. Ignition interruptions were said to be barely perceptible; however, cost, lack of buyer enthusiasm, and ultimately, changes in engine design to comply with emission requirements conspired to nix the system after '73.

What to watch for: One noteworthy difference between the 1971-'72 Riviera GS and the '73 Stage 1 was that the two nomenclatures were now separate packages. The GS option was a Ride and Handling package not mandated by the Stage 1 option, nor did the Stage 1 mandate the installation of the GS package. What the Stage 1 did require was the automatic



upgrade to the Positive Traction differential containing a 3.23:1 gearset. It was possible to order both packages simultaneously, but it's believed few buyers did.

Other options available during the '73 model year included the sporty 15-inch chrome-plated five-spoke Road Wheels (code V2), Superlift hydraulic shock absorbers, a rear anti-roll bar and a trailer hitch.

Bucket seats were optional, but added to the muscular feeling that the Stage 1's thrust still produced. It's not a stick, but the inverted L-shaped THM-400 shifter (left, center) contributed to the high-performance aura for drivers.

BODY & INTERIOR

Despite its distinctive styling, 1973 would be the final year for the boattail Riviera. Though the overall elements were retained from '72—the pronounced sweepspear profile accentuated by a thin molding; the forward rake of the front fascia/grille; the fastback roofline with wrap-around glass—'73 could be considered a softened version of the boattail Riv. Most notable were the less conspicuous bumper contours, especially the reduction of the boattail point in the center of the rear. Likewise, Buick made changes to the front bumper; it was more massive. Both modifications were done in an effort to get a jump on the then-forthcoming 5 MPH government crash regulations.

As one would expect, interiors were distinctive, with the continuation of the wrap-around control

OWNER'S VIEW



When I got my driver's license in 1978, my parents owned a '72 Riviera that I drove often. When I saw this example for sale by the original owner in 1985, I had to stop and look it over. It had over 100,000 miles, a leaking crankshaft seal and a broken valve spring, but it was equipped with the Stage 1 engine, had the bucket seat/console option and the Superlift shocks. And the color combination was an added appeal — I couldn't refuse. In 2005, I finally started its restoration, which I completed in 2013. Mechanically, it was easy to do; however, the trim parts can be hard to find. Even though I own a '72 Chevelle SS, I never seem to get tired of driving my Riviera — it's a great cruiser and a surprising racer for such a heavy car. — *Clark Lumsden*

WHAT TO PAY

1973 BUICK RIVIERA STAGE 1

	Low	Average	High
1973	\$5,000	\$10,000	\$19,500

Add: Factory air conditioning, 5%

Note: As with any muscle car, low production numbers can produce both private and auction sales anomalies that differ from the averages stated here.

HARD PARTS

Floorpan, left-front	\$60
GS fender emblem	\$24
Riviera fender emblem	\$34
Road Wheel center cap	\$39
Stage 1 grille emblem	\$34

ENGINE—STAGE 1

Code	Cu.In.	Horsepower	Torque	Comp.	Bore & Stroke
XA	455	260 @ 4,000 RPM	375 @ 2,800 RPM	8.5:1	4.3125 x 3.90

TRANSMISSION

Code	Type	Ratios: 1st	2nd	3rd	4th	Rev.	Available
----	3-speed auto.	2.48	1.48	1.00	----	2.077	Standard

DIFFERENTIAL

Engine	Transmission	Standard Ratio	Optional Ratio
455, Stage 1	3-speed auto.	3.23:1*	N/A

*With Positive-Traction

BRAKES

Standard Rotors: Front	Standard Drums: Rear	Optional Rotors: Rear
11.86-inch dia.	11 x 2.00 inches	N/A

WHEELS AND TIRES

Standard Wheel	Standard Tire	Optional Wheel	Optional Tires
15 x 6 inches	HR70-15	15 x 6 inches*	HR70-15 whitewall

*Chrome Road Wheel

PRODUCTION

1973 Riviera	34,080
GS Option	3,933
Stage 1 Option	1,234

panel, the profile of which was duplicated on the passenger side. Bench seats were standard, upholstered in cloth, vinyl or a combination of the two, while bucket seats in the same materials and the aforementioned center console were optional. Tilt wheel, electric clock and courtesy lamps were standard appointments that could have been bolstered by air conditioning and power accessories.

What to watch for: Like other models of the era, corrosion can play a part in the Riviera's condition today. Heavy use and outdoor storage may also have had a detrimental effect on the interior. As demand for replacement parts has increased over the years, restoration parts suppliers have been accommodating those needs. Lower panels are already available, as are floorpans and carpet, upholstery and headliners. 🛠️



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PURE STOCK DRAGS 2015

Weather fails to dampen annual showroom showdown in Stanton

By **Matthew Litwin**

Photography by Jim Donnelly and Matthew Litwin

Drag racing legend and long-time Pure Stock regular Ted Harbit arrived with his 1963 Studebaker Tomcat Super Lark, delivered on the back of — what else — a Studebaker roll-back.

Let me describe the **Pure Stock**

Muscle Car Drags, an event held each September at Stanton's Mid-Michigan Motorplex, a quarter-mile patch of pavement nestled in the farming center of the Great Lakes State. Having just celebrated their 21st year in 2015, the "Pure Stock Drags," as they're now known, are a two-day blitz of tire-shredding burnouts for like-minded gearheads, a steady conga line of ever-decreasing elapsed times culminating in an afternoon of carefully paired match races and a year's supply of bragging rights.

Spectators are free to meander through the paddock. The atmosphere is relaxed. Disputes are exceptionally rare. Between runs, it's bench racing, lore and mechanical adjustments, barbeque and banter, and often, racers helping the day's competition make the next round. There're no points, no money on the line and no trophy to hoist, making the Pure Stock Drags a gathering that racers have described as "one big family."

Regular readers are no doubt familiar with our tours into this extended family, as we have covered the track

action for five of the last six years. The allure of the cars, owners and their stories—and their enduring friendship—compelled us to return again in spite of a soggy forecast. The competitors came, too. In all, roughly 106 muscle cars showed up. Most of the men and women there to race were regulars, but in typical fashion, new drivers and cars were sprinkled throughout the paddock. And, also in typical fashion, the racing was spectacular, the brief rain delay during Saturday's finals doing little to curb spirits.

An element that makes the Pure Stock Drags so compelling is the rules. They specify that the event is open only to factory-production performance cars from 1955-'74 retaining the equipment they were originally available with. Factory-option upgrades are allowed, but multiple-model/year parts-bin mix-n-match tactics are not. Porting the factory cylinder heads, intake or exhaust manifolds is *verboden*, though compression may be increased 1.5 ratio points. Likewise, cylinders can be bored up to .070-inch, and camshafts can be mildly altered, but 16 inches of vacuum must be maintained at idle. Complete 2.50-inch exhaust systems are allowed. Limited-production factory race cars are not permitted to compete. Finally, Mid-Michigan is an NHRA-sanctioned facility, and since roll bars are not permitted in the series, competitors may not exceed an 11.50 ET, which makes things interesting for several regulars who are capable of breaking into the high 10s.

The 2016 Pure Stock Drags dates are September 15-17. Check www.psmcdr.com for updates.



Friday's day-long open qualifying session results in some photogenic rounds. Regular Donnie Brass (left) in his 327/350-powered '66 'Vette qualified with a 12.857 ET versus Ken Riebel's 12.297 at the helm of his 427/425-powered '66 'Vette.



Paul Petcou's 1970 Dodge Challenger R/T was one of the last cars to go through tech, but the 440 below the hood, fine tuning and heat-generating burnouts made it one of the fastest runners all the weekend with a best ET of 11.949 seconds.



The Buick contingent always attends in strong numbers, including Menzo Dodge with his '70 GS 455, which qualified with a 12.531 ET @ 108.61. He delighted spectators with this smoke show prior to his round-one win.





Clark Lumsden qualified his rare '73 Riviera Stage 1 with a 14.888 ET, but managed a weekend-best 14.745-second ET on his way to consecutive round wins to claim Saturday's match race.



As the sun broke out from behind the clouds, Kent Gardner lit up the rear hides on his '71 Buick GS 455 during one of his qualifying runs. His best ET came in the first round of his match race a day later: a 12.927 @ 105.09 MPH.



Until a few years ago, Bill Kulenkamp was racing his documented '70 Torino Brougham 429CJ. Considering its über-rarity, he retired the Ford and built this 429 CJ '71 Mustang. Unfortunately, mechanical woes sidelined him in the first round.



Below: Owen Simpson pulls out of the burnout box during qualifying. A Pure Stock staple with his '70 Yenko Deuce Nova, he had a .046 reaction time with a 12.442 @ 112.35, propelling him to the win in Saturday's first round against Ken Riebel.





Ted Harbit, as he has for several years, performed double-duty during the Pure Stock weekend, driving not only his own Studebaker but also George Krem's R3-powered '64 Challenger. Now 80 years old, Ted won both match races on Saturday.



Getting the second-round green light was Dan Kruger in his '68 Dodge Hemi Charger R/T. Paired against Tom Bole ('64 Pontiac GTO), Dan ran his weekend best: 13.754 @103.68, good for the round and match win.



It's hard to miss Jim Jarrett and his '69 ZL-1 Camaro. At the top of the speed charts all weekend with a qualifying ET of 11.741, Jim red-lit in the first round and ran a 12.049 in the second, but lost to Jim Keyes's '67 Hemi R/T.



Not all runs go to plan. James Kryta arrived with his '70 F-85 W-31 and laid down copious amounts of rubber while qualifying with a 13.555 ET; however, late in the afternoon session, transmission trouble developed, forcing him to park the Olds.



On one qualifying pass, Rich Straub (near lane; '70 Plymouth Duster 340) ran against Mike Papp ('74 Pontiac Trans Am). Rich recorded a 14.108 ET, but mechanical woes sidelined him from Saturday's match race.

Top 25 Fastest Race Results – Pairing Winners Only

Name	Year/Make/Model	Best Race Time	Event Weekend*	
		ET @ MPH	Best ET	MPH
Jim Johnston	1969 Chevrolet Corvette L-88	11.694 @ 122.13	11.667	122.13
Jim Keyes	1967 Dodge R/T	11.784 @ 118.76	11.769	118.76
Paul Petcou	1970 Dodge Challenger R/T	11.949 @ 115.39	11.949	115.60
Tim Clary	1969 Chevrolet Chevelle SS 396	12.261 @ 112.30	12.261	112.76
Jim Kelly	1963 Plymouth Savoy	12.416 @ 111.05	12.416	111.42
Owen Simpson	1970 Chevrolet Yenko Nova	12.442 @ 112.35	12.372	112.35
Paul Richards	1968 Chevrolet Camaro SS 396	12.599 @ 111.96	12.599	111.96
Menzo Dodge	1970 Buick GS 455	12.636 @ 107.59	12.531	108.61
Donny Brass	1966 Chevrolet Corvette	12.663 @ 108.01	12.663	108.59
Yvonne McNicol	1971 Buick GS 455	12.666 @ 108.95	12.666	109.62
Bob Telep	1969 Chevrolet Camaro SS 396	12.667 @ 111.20	12.667	112.10
Mike Waligora	1969 Pontiac GTO Judge	12.740 @ 111.82	12.555	112.76
Chris Smetana	1970 Pontiac GT-37	12.847 @ 109.79	12.806	110.48
Tom Kelly	1968 Plymouth Road Runner	12.926 @ 108.01	12.878	108.61
Kent Gardner	1971 Buick GS 455	12.927 @ 105.09	12.927	106.05
Ted Harbit	1963 Studebaker Super Lark R2	13.094 @ 106.15	13.094	109.78
Gary Place	1969 Chevrolet Chevelle SS 396	13.301 @ 108.39	13.194	109.38
Eric Maher	1968 Chevrolet Camaro Z-28	13.322 @ 104.22	13.322	104.22
George Krem	1964 Studebaker Challenger R3	13.341 @ 106.06	12.894	111.26
David Byers	1970 Chevrolet Chevelle SS 396	13.380 @ 105.30	13.266	106.54
Jim Robertson	1970 Buick GS 455	13.395 @ 98.33	13.286	103.85
Frank Remlinger	1969 Dodge Dart GTS	13.436 @ 101.97	13.436	101.97
Tom Payne	1966 Chevrolet Chevy II	13.440 @ 104.91	13.327	104.91
Tom Cannon	1970 Plymouth Duster 340	13.499 @ 103.95	13.499	103.95

* Denotes best time and speed recorded during the entire two-day event



Several racers laid down some incredible burnouts; Frank Remlinger was one in his '69 Dodge Dart GTS. Always fine tuning the 340, Frank's best run of the weekend was a 13.436 in the second round.

Louisiana's Benoit Holloway is known for his prowess with gumbo and tire degradation, and in the last few years those tires have been on a variety of steeds. This year, it was his Tri-Power '64 Pontiac GTO.



Jim Maher has a hard launch in his '67 Chevelle SS 396 in the second round. Having qualified with a 13.032, he ran a 12.657 during this pass and "broke out" by violating the PSD's three-tenths rule that prevents sandbagging.



Another Pure Stock diehard is Larry Weymouth, who always seems to bring a different car from his collection. This year it was a '71 AMC Hornet SC 360. With a four-speed, 4.10 gear and ample tire smoke, his car ran a 13.149 @ 108.36 in qualifying.



One of the Pure Stock Drags qualifying requirements is to run across the scales. Mark Barker's 350-horse, four-speed-equipped '70 Chevelle SS 396 topped out at 3,948 pounds as other racers wait their turn.



Rick Watson's '68 Pontiac Firebird 400 goes nose-up while launching off the line on Friday. A consistent mid-12s muscle machine, it was ultimately paired up with Ron Hammer's '71 Pontiac GTO, but both failed to make it to the third round.



Tyler Mesman is one of a number of next-generation racers that attend regularly. The 26-year-old also thrashes the rear tires on his 455/four-speed '72 Pontiac Trans Am regularly. His best run over the weekend was a 13.165 @ 106.37 MPH.



RISING ABOVE ONE'S STATION

Mustangs on the 18th Green at Pebble Beach: Celebrating 50 years of the Shelby G.T. 350, on the grandest car-show stage of them all

Words and photography by Jeff Koch

t rattles your expectations,

to be honest. Ford Mustang, the ultimate mass-production-for-personalization car of the '60s, creator of a genre, with millions built before the decade saw its sunset. The Pebble Beach Concours d'Elegance, so much more than a car show since 1950—it's the place where the very best, rarest and most beautiful of the world's classic cars compete in elegance and splendor—largely prewar, with an overwhelming quantity of European cars in attendance, where rare things seem common, "special" becomes a relative term and provenance and execution matter in equal measure.

American cars are hardly unknown at the event—Cadillac, Lincoln, Packard, Stutz, Auburn, Cord, Duesenberg, du Pont and myriad other marques have populated Pebble Beach's 18th green for decades. Yet just four American cars have won Best in Show since 1990, most recently in 2013. So that's not it. Special

one-off classes have come and gone, largely to celebrate anniversaries. Recall the hot rod class of 2007, with themes and variations on a biannual basis since (this year's twist: period lead sleds).

Factory-bent sheetmetal is an outlier here—bespoke coachwork is more the norm. Still, these cars only started as assembly-line Mustangs before being hand-fettled and sorted at Shelby's Los Angeles works as part of their transformation into G.T. 350s. But Pebble Beach is caviar; Mustangs are cheeseburgers. Pebble Beach is blue blazers, straw boaters and shockingly expensive ties; Mustangs are T-shirts and blue jeans (possibly even shorts and flip-flops.). Mustang shows: people stroll in and look around; Pebble Beach is the same, but it's \$350 a ticket at the door to get in.

Yet, as was ever the case with Carroll Shelby, he confounds expectations and gets up in your face—even three years after his passing. Who else could get Mustangs on the lawn at Pebble Beach? Who else could get the official car of the hoi polloi under the noses of some of the world's wealthiest and have them nod in appreciation? Who else could infuse something so common with the panache and provenance necessary to visit a location that's simultaneously above its station and richly deserved?

What to make of this?

We suspect little in the long run. As we said, classes come and go at Pebble Beach and we cannot imagine that Pebble Beach is turning into MCACN-by-the-sea. Nor should it. That's not what it's about. Racing history is frequently highlighted, but it tends to be of the road-course variety, rather than that of the straight-line or counterclockwise-circle type. And so, dear reader, cherish these photos. Who knows when muscle cars will make it to the 18th-green again?



Ever seen a G.T. 350 with a vinyl top before? Neither had we, until now. This car was the 1966 prototype, and was made from a factory-built K-code Mustang rather than the partially built machines Shelby usually received. As a result, it had an upgraded "Pony" interior and a blue vinyl top. Shelby is said to have hated the top, so it was never added to the option list. In 2012, the restored machine received a Platinum award at its first SAAC Concours. Owners Linda and Len Perham brought it from Carmel Bay, California.



This is the first Shelby Mustang ever built – chassis 5S003, one of three hi-po 289 Mustangs sent to Carroll Shelby for conversion.

There are a few visible differences between this car and production models: the lettering on the stripe was altered, and the G.T. 350 badge on the front fender was declared redundant.

It was also used in early advertising efforts with chromed Shelby mags on one side and silver-painted steelies on the other, to make it look like more than one car had been built. Mark Hovander brought it from Seattle, and was awarded Second in Class for his efforts.



Shelby's color palette expanded for 1966, including the red seen here. This particular example was a Shelby development vehicle, used for rear anti-sway bar development. Neal and Vicky Hashelder of Santa Clara, California, say that this car has spent its near-50-year life in and around San Jose. After the factory was done with it, it was sent out into the wild, where previous owners autocrossed it and relieved the body to accept larger rubber. It was restored in 2004.



Chassis 5S558 is the fourth-from-last G.T. 350 built for the 1965 model year, and was owned by its original owner through 2009. It stayed under a car cover on his driveway for much of that time, with all of its original parts intact! It was completely original, down to its black-and-yellow California registration tag. The 1986 Indy 500 winner, Bobby Rahal, purchased it from a third party in 2010, and had ex-Newman-Haas/Mario Andretti crew chief Don Hoewel restore it. Their efforts garnered Third in Class.





Brought only for show, not for competition, was the 10th-ever Shelby Mustang to be completed in 1965 – chassis 5010, an Advanced Prototype. It served as the testbed for the rare Paxton/McCulloch supercharger option, and was also fitted with a number of options seen in later G.T. 350s, like functional brake cooling ducts and a folding rear seat. Side scoops became part of the package for 1966, but the '65 Thunderbird taillights never did. Dale Spahr brought out this remarkable machine from York, Pennsylvania.

Below: Part of the G.T. 350's legend was cemented with the "Rent-A-Racer" program, which allowed ordinary schlubs to rent a Shelby through the Hertz rental-car chain for \$17 a day. These special models, dubbed G.T. 350H, were largely black with gold stripes, rather than the traditional white/blue paint scheme, and most were automatics – 800, versus 85 four-speeds built. But very few of them were ordered with the available Paxton centrifugal supercharger, as was the one seen here, owned by Michael and Barbara Malamut of Thousand Oaks, California.



Center: Not actually part of the Shelby class, but rather the outright winner of Class 0-3, the Postwar Racing class, was CSX2602, the fifth of five Shelby Daytona Coupes built to take on Ferrari in the FIA GT wars of the mid-'60s. This car competed in six races: Daytona, Sebring, Monza, Spa, the Nürburgring, and Le Mans. Drivers included Jack Sears, John Whitmore, and American world champion Phil Hill. Its current owner is Kazuo Maruyama of Tokyo, Japan.

Ladies and gentlemen, this is the winner of the Shelby G.T. 350 class at Pebble Beach. (It also won the *Road & Track* trophy.) Why? It's not just the quality of the restoration – though John Brown of Thoroughbred Restorations did an impeccable job. No, the Pebble Beach judges also groove on provenance, and this one has it. Chassis 5R002 was the first competition Mustang built by Shelby; it was driven by Ken Miles, Jerry Titus, Peter Brock, Chuck Cantwell and Bob Bondurant. It also had a dozen victories in just 16 starts in 1965. John Atzbach of Redmond, Washington, owns it today.



SHAKING THE GROUND



The rollicking racing years of Georgia superstar Hubert Platt

By Jim Donnelly

Images interpreted by Bob McClurg, from his archives

Not every motorsports hero in Dixie goes around in circles. For every Bill Elliott from Dawsonville, there has been a straight-line star who established his own bona fides on the strip. And let's be clear, drag racing is honcho-big in Georgia. It can claim expatriate Minnesotan Warren Johnson and his son, Kurt, as two of its own. Of course, so was Dyno Don Nicholson, out of California by way of Missouri, who never left Georgia once he hooked up with Nalley Chevrolet in Atlanta. But here, we salute the memory of the *Georgia Shaker* himself, Hubert Platt, who ran moonshine in his native South Carolina before relocating to Chamblee and taking up drag racing.

Cancer claimed Platt in late September at age 83. In his day, Platt was one of the most feared stock-bodied match racers in the United States, and not just the South. He raced everywhere, from the Winternationals to the rawest Southern strips you could imagine. He started out as a Chevy guy and a teammate to Nicholson at Nalley Chevrolet, but shortly switched to Ford. Beginning with a Thunderbolt, Platt became an utter terror, going on to race A/FX cars, early Funny Cars, Super Stock and Pro Stock before he retired in 1977. He

was backed by major Ford performance retailers, including Tasca Ford in Rhode Island and Paul Harvey Ford in Indiana. Platt had countless wins, but could count two as his favorites: The 1967 NHRA Winternationals, and the other was in 1965 at a rural Alabama strip, where he downed Richard Petty, who was then on a forced hiatus from NASCAR while the Hemi was banned.

Perhaps most memorably, Platt was an entertainer, an early breakout from the mold that later produced Jungle Jim Liberman and John Force. He knew how to stoke a crowd. One time, after wheelstands wiped out both his cars at Lions in California, Platt got on the PA system and lamented that he didn't have a third car he could also break for the benefit of the fans. Longtime straight-line photojournalist Bob McClurg crossed paths many times with Platt when they were both coming of age, watching him race, prepare cars and above all, have a ton of fun.

"He was the epitome of a good ol' boy," Bob recalls. "He liked his moonshine, and he was a hell-raiser. He took credit for having the first flip-top Funny Car with a Mustang body, anywhere. You could tell stories about him for hours on end."

“ Randy Payne is driving this Ford Torino at Pomona in 1969. He and Hubert set records with this car, which had a 428 Cobra Jet in it. Randy was a drag racer from Rome, Georgia, and he and Hubert knew each other for many years. They got hooked up together and got a Ford factory sponsorship.

It all started when Frank Hurley, a PR liaison guy for Ford, suggested that Ford ought to have a team doing performance clinics like Sox & Martini and Dandy Dick Landy were doing for Chrysler at the time. And Ford project engineering officer Emil Loeffler thought that was a great idea. Ford racing director Jacques Passino picked Hubert Platt as captain of the Ford Drag Team on the East Coast. It was around that time that Hubert picked Randy Payne as his choice for a running mate.

The cars, the Torino and a Cobra Jet Mustang, were both painted with Ford's motto at the time, 'The Going Thing,' and were carried by a new Ford cabover ramp truck pulling a flatbed trailer. This photo is from the Winternationals. ”



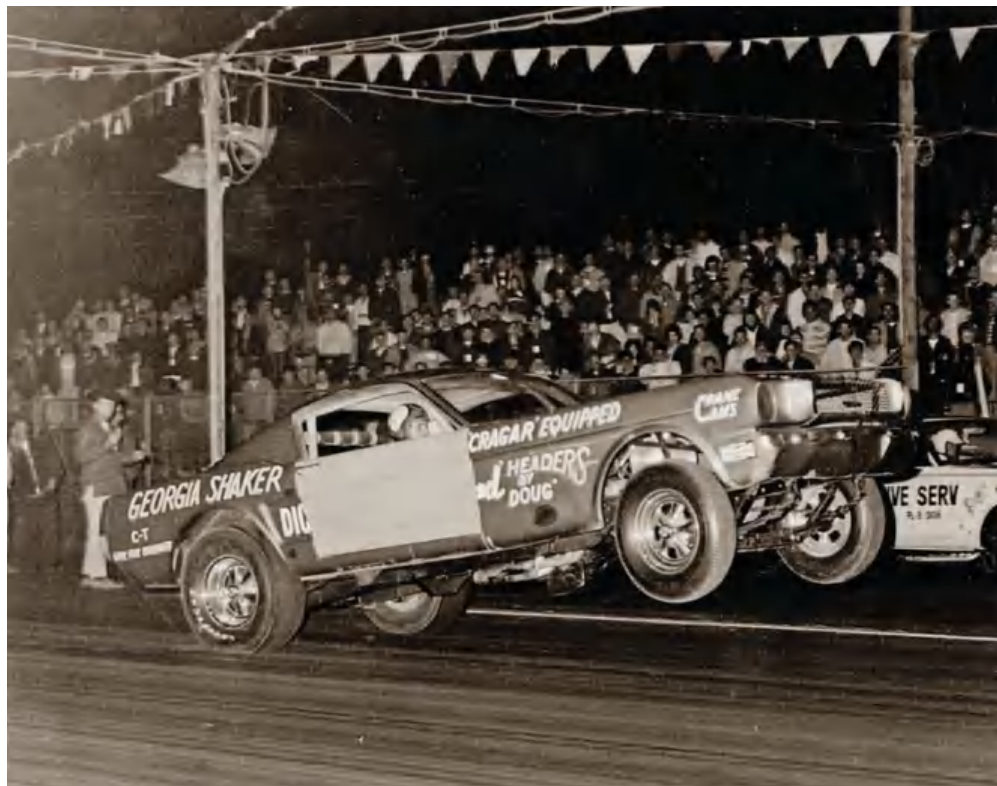
“ Originally, this Ford Pinto Pro Stock was campaigned by Dick Brannan, another longtime Ford guy. Hubert acquired the Pinto and continued to race it. In this photo, you can see that Grumpy Jenkins has really moved on Hubert at the 1972 U.S. Nationals at Indy, where he was the number two qualifier behind Jenkins. Take a look at how Hubert is only wearing a T-shirt. This was before fire-resistant jackets were made mandatory in Pro Stock.

The Pinto's power comes from a 377-cu.in. Cleveland engine, very similar to the package that was being run by Gapp & Roush, which may have actually built the engine for him, although I can't say so for sure. Hubert did pretty good in this car; he ran a lot of match races in it with some of the weight removed. He did a best in NHRA trim of 9.10 at Indy, but the car would easily run in the high 8s when match racing. Eventually, though, the technology and cost associated with the high-winding small-block engines in Pro Stock got to be too much for him. ”

“ I believe that this is a very, very early clinic photo, taken at Foulger Ford in Monrovia, California. The Mustang in the foreground establishes it as 1969, and Hubert is there with Ed Terry, who Ford picked to run the drag team on the West Coast. I think this was probably an early trial run for one of the clinics, because both the guys are there, and they're doing it at Foulger Ford near Los Angeles. So that makes me think this was an early run; it might very well have been conducted in conjunction with that year's Winternationals at Pomona.

For a good ol' boy, Hubert adapted well to being a corporate spokesman. He'd say, 'Hey, I know some of you don't know me, but I'm Hubert Platt from down Southern way, and I'm the good ol' boy who just beat Jere Stahl a couple of months ago at the U.S. Nationals and set the national record.' That's how he broke the ice. This photo was taken by Bob Swaim, coordinator of the Ford Drag Team, who sold it to me. ”





“ Hubert was famous for doing wild wheelstands whenever he raced this car, a match race Mustang, powered by an injected 427 tunnel-port engine burning a mixture of nitro and alcohol. He match raced this car all over most of the country, but probably only a couple of times here, at Lions Associated Drag Strip in Long Beach, California, in 1966.

This car, believe it or not, was entirely homebuilt and all steel, although by this time, he'd swapped in a pair of fiberglass doors. The car was wild and carried the front wheels like this on practically every launch. This photo was shot at a jam-packed nighttime match race by Jere Alhadeff. The Mustang was somewhat of an exhibition car, but it was also a late-generation F/X car and would easily run in the high 9s. The car's been completely restored and is now in the Brent Hajek collection. Look at the size of that crowd. Then look at Hubert, who's racing a nitro car in a T-shirt with no goggles and an open-face helmet. Unbelievable. ”

“ This is from the 1968 Winternationals, when they were going through class eliminations for SS/E. This was the national debut of the Cobra Jet. Here at Pomona, Hubert drove two of them during that race; one in Stock for Tasca Ford and this one in Super Stock, where he runner-upped to New Jersey driver Al Joniec, who was also driving a Cobra Jet.

I think that the way Hubert got involved with Paul Harvey Ford was because they were a big dealer that was on the Ford Drag Team council, that had been involved in drag racing since at least the early 1960s with Dick Brannan, Paul's son Jerry Harvey or Hubert doing the driving. Harvey was just one of the factory guys, like Bob Tasca was in Rhode Island. Paul Harvey Ford was a major dealership in Indianapolis for more than 40 years. He sold the dealership in 2010 and passed away four years later. ”



“ Even though he was already an experienced racer by this time, this 1965 Ford Falcon with a 427 is widely regarded as Hubert's break-out car. The Falcon did fantastic, wild wheelstands, and was a real crowd pleaser, including here, at Cecil County Dragway in Maryland.

That year, Holman Moody in Charlotte built two 427 Falcons, one for Dick Brannan and one for Phil Bonner. And Hubert wanted Holman Moody to build one for him, but Ford wouldn't let them. So Hubert built one himself, at home, in his own garage in Chamblee, Georgia. He had a 427 tunnel port in it, the car basically using a lot of spare parts from the 427 Thunderbolt that he drove beginning in 1964. He named the Falcon *The Smallest Georgia Shaker*.

It was this car that he used to beat Richard Petty during the match race in Alabama. It still exists, unrestored, and it still makes the rounds at some of the nostalgia drag events. ”



“ Hubert ended up running a Pro Stock Maverick for the Ford Drag Team until its cessation in 1971. He then joined forces with Larry Yates on this M&S Welding-built, ex-Ed Terry Ford Drag Team 427 Maverick, which was lighter than his own Holman Moody-built car.

I'm thinking this is 1972, during the IHRA Pro-Am at Rockingham, North Carolina. Awesome burnout, huh? I love this photo, with the clouds in the sky putting just the right lighting on the tire smoke. I think it's really neat.

Larry Yates, was a one-time crew member for Hubert before they became partners on this Maverick. Larry actually took one of Hubert's 1968 Cobra Jet Mustangs to the 1969 Winternationals and raced it, then became a partner on the Maverick, which was a one-year deal only. ”



LETTER OF THE MONTH: REWARDS AND REGRETS

I bought my '73 Challenger from my local Oldsmobile used car lot after three days of haggling on Thursday December 23rd, 1974. Thus I have owned it for almost 41 years.



I found the hood at a wrecking yard off a 440-6 car that had been rolled—it was the only sheetmetal undamaged on the car. After many years, I dropped in a '69 340 and a 727 with a 3.23 Sure-Grip rear end and many extras. The Challenger has been painted because despite always being garaged, the red/orange paint had faded to orange. However, the vinyl top is original.

My biggest regret about my car is that I had to sell my '69 Charger to afford it. Also, about a year later, there was a '70 Superbird that I could have had for \$3,500, but I did not have the money. Oh, and I also regret letting go of the '72 Charger and '72 Dart that I used for everyday drivers and then sold. Your long-time subscriber and Mopar fanatic,

James A. Cook
Lansing, Michigan



CAMARO CORRECTIONS

Jeff Koch's feature on the modified-muscle 1973 Camaro Type LT ("No Penalty," HMM #147) was superb. To save a car and build it into something better than new is the ultimate reward for those of us who thrive on cars.

I would make one point: Jeff notes that in 1973, the best Camaro engine only mustered 245 "gross" horsepower (p.73). He's referring to the Z28 engine (and you could get the Z28 with the Type LT option), but that was 245 "net" horsepower. It wasn't a bad engine at all, and I believe it was essentially the same as the 250-hp Corvette L82 350 (also 1973), but I'll gladly defer to the knowledgeable folks on that one.

Keith Dolan
Brooklyn, New York

I really enjoy your magazine, and I like that you are adding articles on current muscle cars, such as the 2015 Z/28 and SRT Hellcat. It was also very nice to see the ZR1 in your Muscledalooza article. I believe there are many old timers who may still think the old muscle cars are the fastest on the planet, although most ran 14s, which is very slow by today's standards.

In the article about the 1973 Camaro LT, it said in one of the captions that "All '73 Camaros were born with small-blocks..." but that's not completely accurate. Every Camaro from 1967-2016 has been available with a six-cylinder as well. I made sure I was correct by checking in the *Camaro White Book*, which shows that 3,614 Camaros had sixes in 1973.

I look forward to reading your magazine every month.

Roy Wood
West Monroe, Louisiana

Both of you are right: Jeff Koch did list the Z28's 350 as having 245 gross horsepower, though he was actually referring to net output, as you pointed out, Keith. And yes, Roy, the Camaro has pretty much always offered a six-cylinder engine. As muscle car fans, it's easy for us to overlook those offerings — Jeff was referring to the lack of a big-block option when he said all '73 models were born with small-blocks. Just for the record, Roy, the ZR1 you refer to was actually at a F.A.S.T. event held in Michigan and covered in the October issue ("F.A.S.T.er than Ever," HMM #146), not at Muscledalooza, though it would have been welcome. We've been hosting quite a few of the

late-model muscle cars at our events — we even had multiple Hellcats at the most recent gathering.



MORAL SUPPORT

I really enjoyed Terry McGeen's column "In Praise of the Disturbed," in HMM #147. I could relate to many parts of it.

I've been working on my 1970 Olds Cutlass, doing an engine compartment detailing. I started it in December 2013 and it's been a real battle to find time and money to work on this project. Life brings so many distractions, as you wrote. Work and

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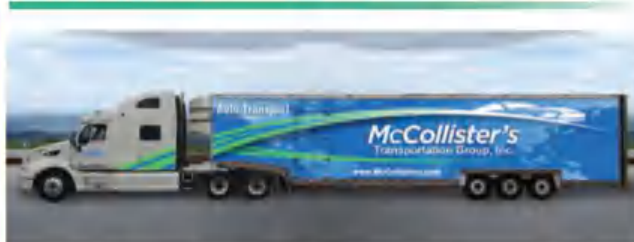


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family obligations are priority over my car.

I told my wife I was going to pull the motor, paint it and put it back in. Now, 650 days and \$2,000 later, the engine is back in its home. I'm still not quite finished, but I'm getting closer.

There were many times I felt like I would never get it back together again. Reading Terry's column made me feel much better. It was like he was reading my mind.

Thank you.

Jeff Shamel

Chichester, New Hampshire



SHELBY FLASHBACKS

Thank you so much for *HMM* #147, November 2015. It brought back a flood of memories, especially the '68 Shelby KR 500. In 1976, at age 21, I purchased my first Corvette, a 1963 roadster, for \$2,500. My best friend chided me for buying a Corvette, especially at that price. After all, he had just purchased a '68 Shelby KR 500 for \$1,400! The whole world thought we were going to run out of gas at that time, so muscle cars were being sold at an alarming rate for cheap. He often let me drive it. Strapping into the four-point seat belt, the adrenalin came on immediately! He still has the vehicle. I updated my Corvette to an '80.

Dave Skirvin

Gwynn, Virginia

ULTRA-RARE RESPONSE

Normally, I don't do the response thing, but Jim McGowan's column ("Make Mine Ultra Rare," *HMM* #146) was spot-on. It was the most honest, believable and realistic opinion I've read in a long time! As a member of the everyday, sub-millionaire, driver-status class, I actually agree that a car should be driven and road appreciated. You don't give a starving dog a rubber bone, likewise, you don't build a muscle car and keep it in a garage or trailer for its life. I'm a humble owner of both a 1970 and an '86 'Vette. They're not perfect, but they're fun to drive, they look good at the horseshoe league and ice cream stand

and they simply make me feel good... and young (I'm 60). I also live in the Northeast, in Syracuse, New York, and still look in the garage in January and dream of May. Tell Jim to keep those two Goats rockin'!

John Doe

Via email

RESTORATION INSPIRATION

I own a '65 Nova, and although I am not a "Mopar guy," I particularly enjoyed the recent Restoration Profile article featuring Jim Peacock's 1974 Challenger Rallye 360 (*HMM* #147, November 2015).

In a world where every other article features rotisserie builds well out of the reach of the average enthusiast, it was refreshing to see a "real world" project. It reminds people that if you are willing to get dirty and put in the work, you can have a very nice car without the facilities of a full-blown restoration shop and/or the budget for a frame-off restoration.

It's okay to scrub, re-seal, paint and meticulously detail a perfectly good running engine. It's perfectly acceptable to keep the car a roller, clean the undercarriage and finish it with a paint brush and POR15 (or some other paint). You don't need to buy a boat-load of reproduction trim and sheetmetal, as you can often repair and recondition what you have.

These kinds of builds are fun and rewarding. This type of restoration is achievable. It can be done at home with some basic restoration tools, learned skills and a lot of patience. You can chip away at it as time and money allow and end up with a car you can be proud to take to car shows and cruise nights.

I would love to see more of these types of restoration profiles, as I think the regular guy can more readily relate to this type of build.

John Smihal

Shippensburg, Pennsylvania

FROM THE SOURCE

Good articles on the Chevy small-block ("60 Years of the Chevy Small-Block," Part 1 and Part 2, *HMM* #145, September 2015 and #146, October 2015).

For the historical record: Buick introduced computer-controlled multi-port fuel-injection architecture in 1984 on the 3.8-liter Buick V-6 as the first domestic high-volume manufacturer. Buick also developed and introduced the first direct-fire distributor-less ignition system on the 1984 turbo 3.8-liter V-6 engine. Buick was also the first domestic manufacturer to in-

troduce roller lifters for high-volume production in 1986.

These technical advancements were also part of the "revered" Buick Grand National turbocharged and intercooled 1986-1987 engine.

Dennis M. Manner

Assistant Chief Engineer—retired

Buick / GM Powertrain

For those outside of Buick circles, Dennis Manner worked in Buick engineering when the division's hottest muscle car packages were being developed, and was closely involved with the 455 and Stage 1 and Stage 2 development. As he points out here, the engineers in Flint continued their developmental pursuits long after the muscle era drew to a close. Thanks for setting the record straight, Dennis.

SEARCHING FOR SIXES

I was looking in the older issues of *HMM* and the "Backfire" column and came across "OHC Inquiry," in the September, 2015 issue (*HMM* #145). Lynn Holt asked, "Where are the Pontiac inline sixes?" That really caught my eye. At my first real job, I drove a company car that was a modest 1969 Pontiac Tempest wagon with a manual three-speed and the base OHC six. I still have fond memories of the car. Compared to the Chevy OHV six (which the Pontiac OHC six was based on), the Pontiac OHC was quiet, smooth and even in base form, would pull to high RPM smoothly and easily. Years ago, I retired and was looking for a final project car. I had owned a new 1969 Camaro, but I've always liked the first-generation Firebird. I recall the Firebirds were a bit front heavy with the V-8, and I thought an OHC Firebird would be a better-handling alternative and more interesting. Sadly, after two years of hunting, I found only one Firebird with the OHC-6 that was a reasonable distance from my home, and then it sold before I got to it.

I suspect your conclusion that many OHC-6 Firebirds have been changed to V-8s is correct. I gave up on the Firebird, but it all worked out. Someone introduced me to Corvairs with the wonderful boxer-six engine—a fun car to drive, supported by a plentiful number of folks who are helpful. For those that want something faster and more interesting, consider the mid-engine Crown V-8 conversion Corvair. We have one in the local club—what an E-ticket ride!

Bob Nichols

Los Angeles, California 🍷

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The Road Went On Forever

“I always ran the car really hard so I could, as Garlits liked to put it, leave them raucous when I left the race track.”

Back in the mid-1970s, we had just entered a new sponsorship deal with

the United States Army. It turned out to be a really good one. We started out in 1974 with our Plymouth 'Cuda and won two Funny Car titles at NHRA national events, the Gatornationals in Florida and at Indy, where I scored my fifth win at the U.S. Nationals. The following season, we switched over to a Vega body and things really started to click for us. We won six of eight national events in 1975, ran the first 5-second pass in the category, plus the Funny Car championship. We put a Chevrolet Monza body on for 1976 and backed it up with seven out of eight wins and another title. Then for 1977, we switched to a Plymouth Arrow body and got another win at Indy, plus the championship. Next year was the one where McEwen beat me in that final round at Indy, but we still picked up our fourth straight championship.

That was big time. Four consecutive titles. The Army was really rolling along. And yet, we were living like gypsies. That's what being a touring professional drag racer was like in those days. You'd stay at the first motel you'd spot that had a vacancy sign lit in the wee hours of the morning, and you'd only stop when you got so tired that you knew you couldn't drive anymore. We were nomads. And you worked on the car around the back of the motel parking lot; you'd pull the car out, check the bearings and do whatever you needed to do, before you'd head to the track.


What was it like? Let me tell you. You'd run, say, Cecil County, Maryland, on a Saturday night, then Islip, New York, or someplace on Sunday. Then you'd drive all night to get to the next spot. Really, it was quite similar to what the Sprint car guys like the World of Outlaws are still doing today. It wasn't anything like today in terms of equipment, though. We had pickup trucks and trailers back in those days, but that was the common thing. If you were a pro, you'd spend the whole season just running up and down the highways. You'd be on that CB radio, looking for the cops so you wouldn't get a ticket. I'd estimate that in 1975, when we were running the Vega, we must have clocked 50,000 miles; anyway, maybe a little bit less. All I know is that by the end of the year, your pickup truck was run into the ground, and you'd have to go out and get another one. You'd have worn the springs and the engine out and maybe have gone through a couple of transmissions by then, too.

But people now have to understand that when we did all that back then, we got paid ahead. By that I mean, we were good enough at racing that our names had gotten

to the point where a track would want you. That was the main reason that even in match racing, I always ran the car really hard so I could, as Garlits liked to put it, leave them raucous when I left the race track. Make sure the people really remember you. So we'd run the daylighters out of the car, 100 percent nitro, whatever it took to beat the Mongoose or the local guy or whatever. When you'd load up to leave, the track operator was literally running out the gate after you, trying to get you to come back the following year at the same time, because you put on a good performance and packed the house. That's pretty much how we did it.

That's not to say we didn't have at least a little bit of down time when we were on the road. Did we go to the Smithsonian or walk around downtown in some big city? Not really. There wasn't much down time to spare, very little. If we were lucky enough to get a weekend off, that was spent at the shop, working on the car, building new parts, so really, as much as I've been around the United States, which is practically everywhere, I haven't seen much of it, like downtowns in the cities or places like that. Like, we'd go to New York City, a place I've been to a bunch of times since those years, but back then, you didn't care that you were in New York. All you wanted to do was fight your way through the traffic on the parkways and expressways and get to the track, which in those cases, was usually out on Long Island. We didn't have a chance to stop at the Empire State Building or anything like that. We'd be hitting it, trying to get to the next drag strip.

One of the places I really remember was Islip, which was about halfway out on the south coast of Long Island. It had a little, tiny paved oval track for stock cars. But if you looked out over the top of the grandstand, I forget in which corner, you'd see down below this little strip of asphalt, which was an eighth of a mile. We used to race there quite a bit. Last I heard, both tracks at Islip are gone and the site was turned into a cookie factory. And it wasn't just Islip. Our life was tons of racetracks, all over the place, one right after the other.

Did I ever get tired of it, want to take a week off, go lie on the beach at Malibu or something? No. No way. Never. I never, ever got tired of it. I couldn't wait to get to the next race. You know, when I came up from painting cars, which was hard work, and had the opportunity to do this, take a drag car and tow it across the country and race constantly, let me tell you, that was a high. I never wanted to give it up. I just wanted to be the best at it. That was always on my mind. And it lasted pretty much for my whole racing career. I'm proud of that. 

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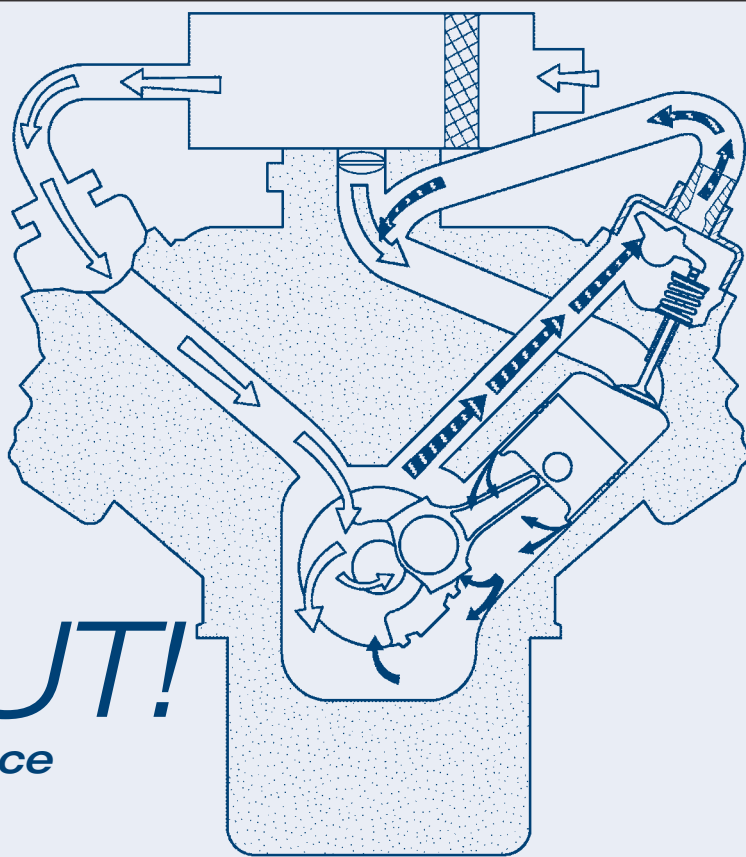
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LET IT OUT!

*The importance
of a proper
PCV system*



By Ray T. Bohacz

Illustrations and charts courtesy of M/E Wagner

The comedian Rodney Dangerfield built a career around the catch phrase, “I don’t get no respect!” If there were a part of an engine that could relate to Mr. Dangerfield’s lament, it is the lowly PCV (“positive crankcase ventilation”) valve.

Anyone reading this magazine is a hopeless muscle car fanatic and thus, I ask a simple question: When was the last time you had a discussion about PCV valves? With a great level of confidence I’ll assume the answer is probably never. However, it is a part of your engine that you should be concerned with, and this primer will explain why.

THE NEED FOR VENTILATION

Every engine needs to have its crankcase ventilated. The crankcase is generally considered to be the area of the engine block and the oil pan that is not part of the cylinder bore. Ventilating the crankcase can be thought of as opening the windows in a room to let the stale air out and the fresh air in. But it isn’t simply a matter of ventilating fumes—the crankcase also needs a means of relieving any pressure that is built up in the oil pan. If this pressure remains trapped in the crankcase, it will build to the point that the engine will leak oil from its seals and gaskets.

Another important reason for relieving this crankcase pressure is to remove the harmful blow-by

gases that leak past the piston rings during normal operation and get into the oil. When mixed with the engine oil, the byproducts of combustion degrade the lubricant and can cause corrosion of internal parts. In addition, it is imperative that any moisture/condensation that forms is removed. If left unchecked, the moisture will mix with the oil and blow-by to create “sludge” deposits in the engine.

The amount of blow-by an engine has is directly linked to the effectiveness of the piston ring seal. This in turn is impacted by, but not limited to:

- Piston ring design
- Cylinder wall finish
- Concentricity of the bore
- Piston-to-wall clearance
- End-gap of the piston ring
- Piston material (cast, forged, hypereutectic)
- Cylinder pressure

When an engine is running, some of the combustion pressure leaks past the ring package and enters the crankcase. The ideal is to have the minimum amount of blow-by through efficient ring seal.

A cylinder leak-down test is one way to quantify the quality of the ring seal. This differs from a compression test, which measures the pressure in the bore created by the piston moving in its stroke (pumping action). A leak-down test is performed with the piston in a defined static position with



both the intake and exhaust valves closed. Compressed air is introduced to the bore via a test instrument at 100 psi, and the meter then registers the amount of leakage as a percentage.

Depending on the age and design of an engine, and its intended use, the acceptable leakage can range from 0 percent to 20 percent. (Note: It would be almost impossible to achieve zero leakage, though some race engine builders have claimed to do so. A more realistic ideal would be around 2 percent). A race engine will be at the lower end of the range, while a high-mileage street or utility engine will typically come in closer to the upper end. The lower the leak-down percentage, the better the ring seal, which means there is less blow-by.

While common practice is to perform a leak-down test with the piston at top-dead center ("TDC"), a better method is to also take a leak-down reading with the piston halfway down in the bore and then another at bottom-dead center ("BDC"). This will provide a complete profile of how well the ring package is sealing and can show if there is an excessive amount of taper or thrust-side bore wear in the cylinder. It is very possible for an engine to leak test at 5 percent at TDC and then jump up to 18 percent at the midpoint of the stroke.

It is important to note where the air leakage is occurring. This is done by listening. Air escaping from the induction tract or the exhaust identifies poor sealing of the intake and exhaust valve(s), respectively. If air is heard in the dipstick tube or coming from the rocker cover, that is piston-ring blow-by.

Though blow-by is the main cause of pressurizing the crankcase, it is not the only possible source. The movement of the crankshaft, and especially the pistons as they travel downward, are contributors to the need to have a means of ventilating the crankcase via the PCV system.

Forced induction engines are more prone to blow-by because their cylinders are being filled using a pressurized inlet charge to create more cylinder pressure during combustion. It is very common for a turbocharged or supercharged engine, when worn, to blow the dipstick right out of its tube. When this happens, you do not need a leak-down tester to know that the rings are extremely worn.

VENTILATION STYLES

The original method of allowing the crankcase to breathe was called an open system, known to many of us as the old blow-by or road draft tube. It was a very simple design that employed the natural pressure differential of the air under the hood versus that going by the road draft tube. The air usually entered the engine at the highest point via a breather in the rocker cover. The blow-by evacuation was greatly aided by the siphoning effect of the air moving across at a perpendicular angle to the opening of the road draft tube, and fresh air was then drawn in through the breather. The problem with this system, apart from the fact that it released pollutants directly into the atmosphere, was that at slow speeds or during idle, there was no draft created and thus, little ventilation of the crankcase.

Even today, many race engines continue to use a modified version of the road draft tube. You may have spotted this arrangement on a race car, which would typically use a breather in a rocker cover with a hose attached that goes down to the header collector and then connects to a one-way check valve. The system uses the velocity of the exhaust gas to siphon the crankcase pressure.

CLOSED SYSTEM

As the need to lower the emissions an engine produced became apparent, and blow-by gases were deemed to be a form of emissions, the closed system was developed. General Motors invented the PCV system. It was determined that 20 percent of the emissions from an engine and fuel system were rooted in the open-ventilation design.

It was deemed that by reintroducing the blow-by gasses into the combustion process, they could be burned and ultimately eliminated, or at the least, greatly reduced. The early closed system was not a PCV since these systems did not use positive ventilation. Instead, the early closed system worked almost like the open system on the race engine, but used the low-pressure region in the engine's air cleaner to create the draft and allow the blow-by to enter the induction path.

The PCV was brought to market on GM engines for the 1963



The design intent of a PCV system is to allow the crankcase to be properly ventilated under all operating conditions. When an engine is modified or a factory-calibrated PCV is not offered for a stock engine, the PCV function should be questioned.



A cylinder leak-down test will provide valuable information about the engine's ability to seal the cylinders.



The M/E Wagner adjustable PCV allows the flow rate and vacuum transition point to be tuned for your engine.



The DF-17 can be mounted in the stock location, or it can be mounted remotely for applications that did not use a PCV originally.

model year. Shortly thereafter, the rest of Detroit followed suit. The GM-invented PCV system took advantage of the greater depression (low vacuum) that is found in the intake manifold and controlled it with a valve (the PCV) that employs a pintle, seat and spring.

The PCV is made with either a variable or a fixed orifice, along with a spring-loaded plunger that is acted on by engine vacuum. When the engine is off, the valve is closed. Then, under normal or light-load driving, engine vacuum works against the spring pressure to open the valve sufficiently to purge the crankcase of both fumes and pressure with little restriction. Under very high vacuum, such as at idle or when the car is coasting with the throttle closed, the plunger is spring loaded in the opposite direction and the flow is limited via an internal bleed orifice. This is done to prevent the PCV from altering the air/fuel ratio very much, negatively impacting the way the engine idles, runs or responds to the throttle being reopened when the coast-down situation ends.

As an aside, an additional function of the PCV system is to eliminate any moisture build-up (condensation) that can form in the engine, especially for a vehicle that sees many short-cycle trips.

Thus, the PCV system can be thought of as a precisely calibrated manifold vacuum leak. It needs to balance the bleeding of the vacuum from the intake manifold with the ability to purge the blow-by and pressure from the crankcase.

Factory-designed PCV systems usually employ a baffle under the valve's mounting position as a means of preventing the valve from sucking up engine oil. Many aftermarket "dress-up" rocker covers do not include a baffle, which can lead to the PCV siphoning engine oil into the intake manifold.

THE M/E WAGNER DIFFERENCE

The factory PCV system is a wonderful design, yet in contrast, it can often be the root cause of problems. A malfunctioning PCV can result in an engine prone to oil leaks and oil vapors under the hood, while also upsetting the way the engine performs. If I had a dollar for every carburetor that was replaced or blamed

for a driveability or idle issue that was actually created by the PCV, I would be a rich man.

When a car is engineered, the manufacturer goes to great lengths to design and calibrate the flow of the PCV system for that particular engine, and usually the resulting system works superbly. Later, the owner of one of these vehicles goes to the auto parts store to buy tune-up parts and purchases an aftermarket replacement PCV valve. In most cases, the outside of the valve looks the same and it fits as it should; however, the flow rate for blow-by and vacuum may not be correct for that engine. It is impossible for an aftermarket company, even back in the 1960s, to make a valve with the proper flow rate for every engine coming out of Detroit. What they did and still do today is have a generic design that can be packaged into a different enclosure so that it mounts properly. Sometimes you win and all is well. Other times, there is a negative impact on the engine. From there, the question is: How great is that impact and when is it detected? For this reason—and I have written this many times in my "Ask Ray" column—a newer engine should use a factory replacement PCV valve.

But when it comes to your muscle or collector car, using an OE PCV is probably not an option for two reasons. First, the engine is long out of production, so no OE parts are offered. The other issue is that the amount of blow-by and engine vacuum are now likely different than they were originally, because you may have hot-rodged the power plant with a performance camshaft, carburetor, intake manifold or whatever.

The symptoms of the wrong flow rate or vacuum transition point of a PCV valve are oil leaks, oil in the air filter, leaks/fumes around the rocker cover, persistent rear main seal issues, poor idle quality, the carburetor's lack of responsiveness to adjustment, tip-in stumble/hesitation, and pinging, poor throttle response.

The PCV valve, if not correct, also impacts the carburetor calibration beyond idle. It must be recognized that the circuits of a carburetor employ a building-block approach—the idle circuit has an impact on the main metering circuit, and so on. If you have a PCV valve with an excessive amount of flow (vacuum) or



A cutaway of the DF-17 shows the two different flow paths (idle and cruise).

The single plunger (OE-style) is replaced with two balls for flow control.



The extremely important idle-to-cruise transition can be tuned easily.



Since it is serviceable, the DF-17 is the last PCV that you will ever buy.

it does not transition in a linear manner, you can spend a good deal of time trying to compensate for this by playing with the carburetor and ignition timing, though to no avail.

Prior to reading this primer, you may never have thought the lowly PCV valve could cause so many issues. Many enthusiasts have opted to deal with crankcase ventilation by using only open breathers, but they are not the answer, since this arrangement does a poor job of ventilating the crankcase without the benefit of a draft tube.

When I had my engine shop, I fought crankcase ventilation issues for years. I would often need to buy a handful of PCV valves for different applications and from a variety of manufacturers to try and get one that would be acceptable. Most times my choice was a compromise, and the valve was never really what I wanted. If your engine is suffering from any or all of the ailments I listed previously, then there is a very good chance that the PCV that is installed has the wrong flow rate and/or vacuum response/transition.

The frustration of building a highly modified Ford engine only to be greeted with tuning issues from the incorrect PCV was the impetus for the M/E Wagner DF-17 Dual Flow PCV. It was created by the father-and-son team of Gene and Matt Wagner.

When I found out about the M/E Wagner tunable PCV valve, I became extremely excited. It is a part that the industry should have invented 40 years ago, but didn't.

The DF-17 is beautifully made in America from aluminum and is highly polished. The real story is that it offers almost infinite adjustability for flow rate and vacuum-transition response. The

design replaces the pintle/plunger with two check balls. It can also be configured into a fixed orifice mode for engines that have very low or unstable vacuum. It has the unique ability to offer what is known in engineering as "two degrees of freedom" (adjustability). The idle flow rate and idle-to-cruise transition vacuum level can be calibrated separately.

It is important to add that the development of this valve was not a hit-and-miss venture, but was rooted in a major investment in testing. That required the M/E Wagner team to create and build its own PCV test bench, since there were none commercially available. The laboratory testing was then supplemented with countless hours of on-car research with a number of different engines, which enjoyed just as many varied performance modifications. For the complete story, please visit the M/E Wagner website read the PCV Shootout article.

The DF-17 is designed to fit every domestic engine that has been built in the last 60 years. It is very easy to calibrate with a simple vacuum gauge. M/E Wagner provides in-detail and easy-to-understand instructions. They also have a technical assistance line that is manned by Gene to aid you if the need arises. The DF-17 is also rebuildable. Once set, it does not need to be tuned again unless your engine combination changes.

Retailing for \$129, the DF-17 may seem expensive for a PCV valve. However, as someone who struggled with PCV tuning issues for years, I can say with confidence that it is a worthy investment for a muscle car engine, even a stock one, offering an end to ventilation-related oil leaks, dirty engines and poor driveability once and for all. 🛠️

TELLTALE SIGNS OF AN INCORRECT PCV

When I tune an engine, my goal is to achieve the slowest and smoothest idle speed with the leanest possible air/fuel ratio.

Through years of experience, I have learned to recognize when any one of these parameters is skewed. When that happens, I will then remove the PCV and plug the vacuum line, and then create a temporary means to allow the engine to breathe, such as leaving an opening in the rocker cover or pulling the dipstick up out of the tube. I then do a cursory retune of the carburetor/ignition calibration. If the engine responds as I feel it should, I know that the PCV is the culprit.

Often the PCV is incorrect for the engine in a number of ways. It is

possible for a valve to create an excessive vacuum leak at idle while still not flowing enough blow-by gases or sufficiently relieving the crankcase of pressure and moisture. Or, the valve might do a good job of ventilating, but uses a huge amount of vacuum to accomplish that. Or, the valve can cause any combination of these concerns. Because of this, the DF-17 is a boon to the industry, thanks to its level of adjustability for both vacuum response and ventilation.

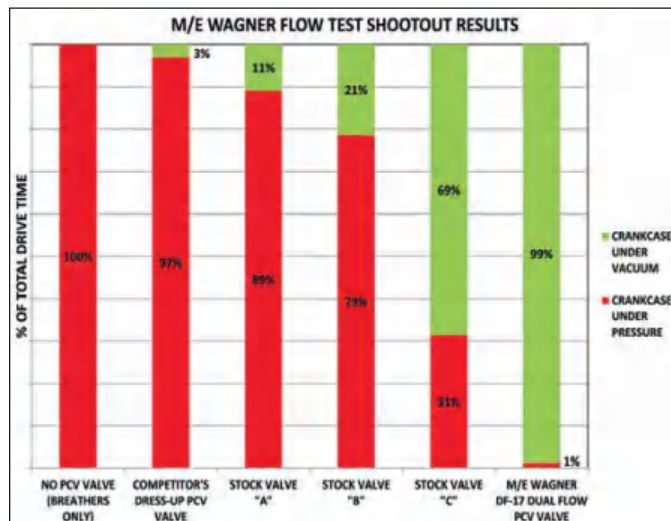
One last thing: Many people will shake a PCV valve and listen for the plunger to rattle as some sort of test. That procedure could not be more ineffective—it is normal for a PCV valve to rattle when disconnected.



The DF-17 is adjusted by using a vacuum gauge. Complete and easy to understand tuning instructions are included.

SOURCE:

M/E Wagner • 570-899-4544 • www.mewagner.com



This chart tells it all. This is a 17-mile varied-load drive-cycle test. The DF-17 keeps the crankcase under vacuum 99 percent of the time.

ANIMAL CHARM

An 11-second Pure Stock '69 Chevelle 300 Deluxe that proves that some stock Chevelles are more equal than others

By Jeff Koch

Photography by Matthew Litwin

Quarter-mile racing is a funny old game. You'd think that the more power you had the better off you'd be, but getting down the quarter-mile before the guy next to you, it turns out, may not always be about raw power and brute force. Mix in the rules of Pure Stock racing—where period-correct factory-style tires need to be on period-correct factory-style wheels, thus limiting traction no matter what rear gear gets stuck in the pumpkin—and getting ever-faster becomes more and more of a challenge.

There's a little more finesse involved. A little more strategy than just "stomp on it."

In his pursuit of ever-lower quarter-mile ETs, Tim Clary of Britton, Michigan, had hit a wall. Not literally; the sheetmetal on his green LS6 Chevelle four-speed remained as straight as the factory had made it. But in the decade he'd been racing his LS6, he'd only been able to get down to 12.19, and no quicker. Experimenting with everything from suspension set-



tings to launch technique netted him no gains. Tim wanted to get into the 11s badly, like the Pure Stock-competitive Corvettes and the Hemis had done. And if you're predisposed to the Bowtie brand, an LS6 Chevelle makes sense, right? All those cubes, all that power—and that's just for starters: Working within the rules, you can get more of both. Yet 12.19 was Tim's best; nothing he did could even break him into the 12-ohs, much less the 11s.

And so Tim changed his thinking. A hundred pounds, the old rule of thumb goes, is worth a tenth of a second. A '69 Chevelle 300 Deluxe two-door sedan has an advertised shipping weight of 3,165 pounds—lightest of all A-bodies for the year, and a full quarter-ton lighter than the LS6! Even allowing that half of that is for the SS 396's big-block, how much faster could you run down the track? Exactly: lots.



How is this resto-stock-look engine pumping out 491 horsepower through exhaust manifolds? Start with class-legal 12.38:1 compression, a .070 overbore, and a set of L89 aluminum cylinder heads. Optimized carb settings and a much-practiced launch technique make for 11-second timeslips.



As a bonus, for only one year in Chevelle history, the low-level 300 Deluxe, with its window frames, vent windows and taxicab interior, was available with Chevy's popular SS package. The SS 396 stopped being its own series in 1969, and instead the SS 396 became the RPO Z25 option—available on

any two-door Malibu, Chevelle or El Camino. Because the SS 396 was an option for '69, rather than its own series, a VIN couldn't tell you if a car was a real SS 396 car or not (save for two SS 396-only paint codes—Hugger Orange and Daytona Yellow—neither of which factors in with our Glacier Blue

example.) And to the Pure Stock ranks' credit, the rules don't much care what engine a competitive car was born with, as long as whatever it's running is correct for the year and model. Everything clicked into place. The search was on for a clean 300 Deluxe.

The answer came from a seller





in Missouri. "The guy who had it for sale is a Chevelle 300 Deluxe guru; he had five of 'em at the time. He started with a clean Southern body—the cleanest he'd ever seen, he told me," Tim reported. "It was a real V-8 Deluxe 300. He was going to build it for [the unlimited-yet-stock-appearing] F.A.S.T. class of racing, but he lost interest, so the complete body was just sitting there. I bought it as a roller, since I was going to do my own driveline, and so I didn't take the transmission, rear or any of that. I did have to change the suspension back to stock, though, so I could run it in Pure Stock."

You'd think it would be simple to just drop the LS6 under the hood and score easy and instant 11s, but that's not how the world of the Pure Stock drags works. Pure Stock rules are clear on this point: If you're running a 1969 car, it had better have a correct and corresponding 1969-casting-number engine under the hood. It can run up to .070-inch overbore, and a point and a half more compression than stock, but monkeying with stroke, head porting, valve sizes... all of this is verboten. The 454 was no good to Tim anymore. He had to build a 396.

Now, this opened up a world of possibilities. Keep in mind, in 1969, you could still order the \$647.75 aluminum L89 heads if you also or-

dered the \$252.80 L78 Special High Performance Engine option for your SS 396. The L78 was (under)rated at 375 horsepower at 5,600 RPM, with torque peaking at 415-lb.ft. and 3,600 RPM, yet it wasn't even listed in dealer showroom catalogs or literature, much less any mention of the aluminum L89 heads. Look at a brochure and you'd think Chevelle power stopped at 350 hp. It was up to the go-fast buff books of the day to tell the world about the L78 high-performance option. With the addition of the aluminum-casting L89 cylinder heads, advertised power didn't increase—changing the casting material alone won't make more power. However, the lightweight head castings did shave nearly a hundred pounds off the front of a nose-heavy Chevelle—enough to feel the difference in the seat-of-the-pants.

The internals are stuff that Bowtie acolytes can recite in their sleep: 11:1 compression, four-bolt mains, forged steel crank, 1.7:1 rockers, 2.195/1.845-inch valves, .5197-inch lift cam with 316/302 degrees duration, a 780-cfm Holley four-barrel on an aluminum dual-plane intake, and a dual exhaust with 2-inch pipes. But, after unearthing a set of virgin "842" casting L89 heads that he'd been holding in his parts stash for just such an eventuality, Tim set about sketching out what

was allowed within the boundaries of Pure Stock rules. "We're allowed to run up to 1.5:1 over factory compression," he says. "It was originally 11:1, and the combination I'm running ends up right at 12.37:1."

"The camshaft must be within one percent of factory spec, so it's a custom grind of a factory GM advertised cam. I ran it in the LS6, and while it was about right for that car, it's actually a little big for the L78! You're allowed to jet your carb, but there's no porting, and they'll pull you to check that you're running the right size base plate."

Door panels, a nearly-featureless bench seat (with headrests, plus seatbelts for safety) and block-off plates for both radio and heater are among the plain-Jane features. A carpet appears instead of a rubber mat because carpet weighs less.



OWNER'S VIEW

I've been into cars and drag racing since I was in high school. I had an '80 Monte Carlo with a 355 small-block that I raced at Milan [Dragway] in brackets and in the High School Nationals program they had. I've had my '70 Chevelle for 24 years. I raced it with a modified 454 that was good for low-11s years ago. Then, I wound up running my '71 Torino 429 CJ in a big-block shootout that Dan Jensen and Bob Bowden (of the PSD events) put on back in the '90s and had a blast. After that I was hooked. I've been running the Pure Stock Drags ever since. This '69 Chevelle is the car I'd been thinking about building for a long time.—**Tim Clary**



For the exhaust, we're allowed to run 2½-inch pipes; they're mandrel-bent now, to eliminate the kinks. It flows great, and I saw huge gains putting an X-pipe on.

"But, there's no intake or head porting, no exhaust porting. You're allowed to blueprint, but they can tear your motor apart and make sure that there's no funny business," continued Tim, pointing out that building an engine that is optimized can potentially lead to questioning of its legality. So, to ensure that everything with his engine was genuinely legit, Tim engaged a professional opinion. "I had Bob Bowden, one of the people who used to put on the Pure Stock Drags, here when I put the engine together. He gave me a hand, and that should squash any doubt."

And then, a trip to the dyno. "We must have made 50 pulls or more," Tim recalls. "I had a belt drive [for the camshaft] on the motor so I could adjust the cam

two degrees at a time until I found the sweet spot. Lots of research followed there: valve lash, jetting, timing... I found a lot of power on the table there." How much power? How about 491 horses on the dyno? And how about 450 pound-feet of torque?

That's the kind of power it takes to push a Chevelle into the 11-second range, making Tim Clary's Chevelle Deluxe 300 the first Pure Stock-legal GM A-body to cross the 11-second barrier on G70-14 Firestone Wide Oval rubber (just one size wider than factory, as the Pure Stock rules allow). "I actually did three 11-second runs that weekend: first was an 11.97, the night before the official race; after the Hemmings shootout I kept running. My friends kinda burst my bubble a little bit, telling me that it didn't count since it wasn't at the actual Pure Stock Drags event. They were right. But the next day, I ran the number; the air was incred-

ible that day. When I got my time slip, I forgot I had my helmet on, and afterward I jumped around and clunked a few heads. I was the fastest A-body again this year, but I only did a 12.21."

Elevens in a Chevelle, on period street tires, is more than just power—it's about figuring out how to control that power. Some of it is in the engine: It's why that 450 pound-feet figure seems light in the face of 491 horsepower. It needs to be: Those old-school wide-oval Firestones can't take a hit of 500+ pound-feet off the line, and so much of the cam adjustment wasn't just for peak power, but to sort out where the power came on, so that the revs were high enough that Tim wouldn't smoke the tires at the line.

"It's all in how you launch," says the man who's running 1.76-second 60-foot times in the car you see on these pages. "There's no magic to it, or traction control—just a lot of seat time. I only bring it up to about 2,000 RPM—and then I just roll into it heavy, but I don't just smack the gas pedal and blow the tires off. I call it 'don't squash the egg'—meaning, you need to pretend that there's an egg between your foot and the gas pedal, and bring those secondaries in slow. Races are won and lost there at the lights; hit it hard out of the gate and you'll go up in smoke every time. And I get some great 1/8-mile times once it's flying."

There are subtler tweaks, as well. "I make a lot of adjustments... I loosen the front control-arm bushings so that the nose rises more. At the rear, I run the [F41-style] factory boxed lower control arms, and we're allowed to box the uppers too. I run good polyurethane bushings and keep 'em greased up. Any [factory

The joy of the Pure Stock Drags is that cars that really do look like showroom-stock muscle cars, without the benefit of decades of technology hidden beneath, are able to run 11s.



available] gear ratio is okay in the stock rear; I'm running a 4.33:1. Once you start playing with it and see what it does and doesn't do when you change things, you discover a lot of tuning tricks."

One of those tuning tricks? Figuring out where the weight is, and how to get it out while still having it be a full-steel car. "This was a rubber floor-mat car, but it turns out that the rubber mat weighed more than carpet," Tim tells us of his radio-delete, heater-delete Deluxe 300. "A little here, a little there... I went through my parts stash and weighed different brake drums, and the lightest pair went on. What's that they say, 'Sweat the ounces, and the pounds fall off'? And the wipers and lights still work—there's no funny business like that." Tim reports that his Deluxe 300 weighs "3,600 pounds with me in it. I'd be better off sticking my wife in there; it'd go faster."

And, of course, the idea of cheating is strictly downplayed. "People crawl around and look underneath to see if you're doing anything funny. If anyone sees something aftermarket, they'll call you back to the tech tent and check you out. There have been some cars that have raised eyebrows when they were on the scale, but this shouldn't be one of them. In 2014, I ran an 11.92 before I did my 11.89. When I got back to the pits, I was immediately tapped on the shoulder and invited to the tech tent. I passed with flying colors, then went out and duplicated my time right away. There wasn't any chance for any funny business."

There is also an emphasis on the aesthetic at the Pure Stock Drags—no primed fenders or mismatched panels, and all of that bodywork had better be steel if that's how the factory built 'em. "It really is a rolling car show where people aren't afraid to enjoy them. This is what they're built for. There's nothing better. Watch the stands at the Pure Stock event—the stands are full, and people are happy to talk about the cars. At most car shows, you're not allowed to touch 'em or breathe on 'em. At this last event, someone wanted a picture of their son in the driver's seat, and I said go for it! We all love our cars, but we also love to have fun in them. You can only watch 'em get wiped with a diaper for so long." 🍀

1969 CHEVROLET CHEVELLE SS SPECIFICATIONS

ENGINE

<i>Block Type</i>	Chevrolet Mark IV "big-block" cast-iron V-8
<i>Cylinder Heads</i>	Chevrolet Mark IV aluminum "842" casting OHV, 2.19/1.85-inch valves
<i>Displacement</i>	410 cubic inches
<i>Bore x Stroke</i>	4.165 inches x 3.76 inches
<i>Compression Ratio</i>	12.38:1
<i>Pistons</i>	Diamond forged
<i>Connecting Rods</i>	Stock
<i>Horsepower @ RPM</i>	491 @ 6,400
<i>Torque @ RPM</i>	450-lb. ft. @ 4,500
<i>Camshaft Type</i>	GM mechanical flat-tappet
<i>Duration</i>	242 degrees intake, 242 degrees exhaust (at 0.050), retarded 4 degrees TDC
<i>Lift</i>	0.520-inch, intake/exhaust
<i>Valvetrain</i>	GM 1.7:1 ratio roller rocker arms, Trend lifters
<i>Fuel System</i>	GM dual-plane aluminum intake manifold, Holley 4150 780-cfm four-barrel carburetor with vacuum secondaries, AC Delco mechanical fuel pump
<i>Lubrication System</i>	Stock mechanical pump
<i>Ignition System</i>	GM breaker-point-type distributor with Crane XRI electronic conversion unit
<i>Exhaust System</i>	GM cast-iron manifolds, Pypes 2½-inch mandrel-bent dual exhaust with X-crossover and Pypes mufflers
<i>Original Engine</i>	Chevrolet small-block 327-cubic-inch V-8

TRANSMISSION

<i>Type</i>	GM THM-400 three-speed automatic, column-shifted
<i>Ratios</i>	1st 2.48:1 2nd 1.48:1 3rd 1.00:1

DIFFERENTIAL

<i>Type</i>	Chevrolet 12-bolt with Positraction limited-slip
<i>Ratio</i>	4.33:1

STEERING

<i>Type</i>	Saginaw recirculating ball nut, manual
<i>Ratio</i>	27.9:1
<i>Turns-to-lock</i>	5.2
<i>Turning Circle</i>	42 feet

BRAKES

<i>Type</i>	Hydraulic, with power assist
<i>Front</i>	10.94-inch vented discs
<i>Rear</i>	9.50 x 2.00-inch drums

CHASSIS & BODY

<i>Construction</i>	Steel body on welded perimeter frame
<i>Body Style</i>	Two-door, six-passenger coupe
<i>Layout</i>	Front-engine, rear-wheel drive

SUSPENSION

<i>Front</i>	Independent with ball joints, upper and lower control arms, coil springs, anti-roll bar, hydraulic tubular shock absorbers
<i>Rear</i>	Linked 12-bolt axle with boxed control arms, coil springs, anti-roll bar, hydraulic tubular shock absorbers

WHEELS & TIRES

<i>Wheels</i>	GM styled steel drop-center Front 14 x 7 inches Rear 14 x 7 inches
<i>Tires</i>	Firestone Wide-Oval Front G70-14 Rear G70-14

PERFORMANCE

<i>1/4-Mile Acceleration</i>	11.89 seconds at 116 MPH
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ELECTRICAL GREMLINS

Q: I've got an electrical problem I hope you can help me with.

I'm finishing a restoration on a '69 Dodge Dart convertible. I've pulled the dash and restored it, but now I'm having issues with my gas gauge and temp gauge. The gas gauge didn't work before, but the temp gauge did. The wiring was replaced with an M&H harness and was perfect.

After replacing the voltage limiter, it seemed everything was good. But then, when I started the car the next day, the gauges started going crazy, pegging back and forth. Now neither of the gauges work, and the ammeter is in constant discharge, even when I rev the engine. Also, only one horn works when both worked before. The alternator was tested and deemed good (the voltage regulator is good also). I've checked the grounds, and they seem okay as well. What the heck can I do next?

Kevin
Via email

A: The good thing about a problem like yours is that it is probably all related — when you find the cause, everything will most likely fall in line.

I have written this many times before: You cannot look at a ground and tell that it is good. You need to perform a voltage-drop test on it. I tend to think that the Dodge either has a poor or open ground or a short circuit (two wires touching). It is common to "skin" the insulation back from a wire when running it into place, especially through the firewall or other area where a sharp surface may be.

There is no other way to fix this problem than to begin with a thorough exploration of the wiring and installation. I am quite confident you will then find the problem. Let me know how you make out.

I AM SENSING SOMETHING

Q: My question has to do with the replacement interval of oxygen sensors. Are they more mileage sensitive, or does age also come into play? A lot of "modern" computer-controlled cars are now becoming collectible classics that still must be maintained if driven.

Dale Komives
Via email

A: The purpose of an oxygen sensor in every application is to monitor the air/fuel ratio and to keep it at 14.7:1 under most running/driving conditions for the best catalytic converter efficiency. With that established, the sensor has the potential to live as long as the car does, given the right conditions. Using my 500,000-mile Ford Escort as an example, I replaced the primary oxygen sensor at 250,000 miles just as a preventative maintenance measure. There was nothing wrong with the original, and the performance, emissions and fuel economy did not improve or change in any way with the new unit. The secondary sensor that is used to monitor catalytic converter efficiency is the original unit with just shy of 500,000 miles on it.

What will degrade an oxygen sensor, and rather quickly, is a poorly tuned engine — one that idles a good deal, has a mechanical issue, or experiences very short trips and numerous warm-up cycles. In many ways, that describes the life of most collector cars. This condition is exacerbated when the car is carburetor-equipped, since the mixture during cold start and warm up is substantially richer than with EFI.

The other enemies of oxygen sensors are leaded fuel and anti-freeze entering and being burned in the combustion chamber. Thus, to answer your question: Yes, the oxygen sensor is considered a consumable and, depending on the use of the car, it may not be a bad idea to replace it with a factory-style unit every five or six years.

SLIPPERY SUBJECT

Q: First of all, I enjoy reading your column every month and the magazine in general. It takes me back to my days growing up in the '60s when all the muscle cars were hitting the streets.

Being a little short of cash back then, I couldn't dream of having a new one at the time, so I had to settle for some lesser cars until I got a little older. After owning a few



nicer vehicles and having the urge to feel the road again through the old cars, I now have a nicely restored '69 AMC Javelin with a rebuilt 390 bored to 400, a four-speed, a slightly more aggressive cam and some basic add-on equipment, including headers, a Mallory Unilite ignition, and an Offenhauser intake with an Edelbrock 650 carburetor. It can be hard at times to find parts for this engine.

When the engine was rebuilt, I used 10W-40 mineral oil for a few miles and then changed to a full synthetic 10W-40 Castrol product. With only 400 to 500 miles on it in five years or so, should I consider an additive for this setup, and could you recommend one for me?

It seems to run fine. I am not fretting over an immediate failure, but hope to see that it lasts for me. It's a one-off neat old car that always gets some attention when I am out on the road.

I'd also like your opinion on the carb setup. It is not a very good performer compared to some of the other older V-8s I have owned—it just seems to be lacking somehow.

Because the intake manifold is configured for the four uniform round ports, it lends itself to using the Edelbrock-style carbs.

I enjoy the magazine and look forward to next month.

Thanks for your help.
Bob Manowski
Wausau, Wisconsin

A: Thanks for the kind words and for reading my column.

Since your engine is modified with a performance camshaft, and I will assume that it is a flat-tappet design, I strongly recommend using an additive with the oil, especially since the engine is running modern synthetic oil. It must be recognized that modern synthetic oil is made for modern engines. The performance cam has increased valve spring pressure, and that is where the additive becomes necessary. There are many excellent products that you can use, and as long

as it is a name-brand additive for older engines, the choice is yours.

In regard to the engine's performance, I suggest getting the car on a chassis dyno at a shop that knows how to tune a carburetor and distributor. I am completely confident that the fuel and ignition curves are nowhere near being correct, and that is where the power lies. Good luck, and let me know how much power it picks up when done.

SHIFTY BUSINESS

Q: Enjoy your column. I have been working on cars (as a hobby) for over 50 years and learn something new with every project.

I pulled my '82 Corvette's TH-700-R4 transmission to reseal the front and rear (nothing internal). When I put it back, I noticed it wouldn't shift out of first until nearly 2,000 RPM. I double checked the T.V. ("throttle valve") cable and all was okay. I had adjusted it per factory procedure, opening the throttle by hand. So, I hooked up a gauge to the line pressure tap and found that the pressure was over 90 psi in park (it pegged my 90-psi gauge). This was with cold fluid and 1,200 RPM. I unhooked the T.V. cable, and the pressure dropped to about 77 psi (spec is 55-65).

Since the transmission sat for about two years, I thought maybe the T.V. was sticking, so I removed the valve body and checked all the spools—everything seemed okay. What I found in the T.V. section was a short, flat metal popsicle-looking stick in the main spring. After a close look, I saw the words "Shiftkit." I also noticed the throttle-valve spool looked different. It had two springs on it. After some investigation, I believe it might be a Transgo kit.

I have never installed a shift kit, so I am not familiar with what pressures they may affect. So, with everything looking okay, I put the valve body back in and played with the T.V. cable adjustment while watching the line pressure. I managed to get it down to about 77 psi when I ran out of adjustment. I didn't check full T.V. as I don't have a 200-psi gauge. It now shifts out of first at about 13 MPH and into third at about 33 MPH, but goes into drive kind of hard.

In the case of the 700-R4, does a shift kit possibly increase line pressure? Do you then have to "custom" adjust the T.V. cable? If not, any idea where to look next? Any suggestions will be appreciated. Thanks.

Dave Johnson
Via email



A: The old Transgo shift kits were top-notch and a favorite of mine. An old friend, Tom Huber from Butler Transmission in New Jersey, (now closed) turned me on to the brand, and he was an excellent transmission guy.

I am confused about one thing though: How did resealing the unit cause this problem, unless some dirt or seal material got in?

A shift kit can be tuned different ways, and yes, one purpose is to raise the line pressure to quicken the time to complete the shift while also allowing the clutches to hold more engine torque. A slowly completed shift leaves the clutch slipping as it is engaging, creating wear and excessive heat.

From your letter, you are more familiar with transmissions than most, since you have a pressure gauge and had visual recognition of the parts. I believe Transgo is still in business. If so, you may want to give them a call and they can suggest what parts from their kit you will need to soften the 3-4 shift to your liking.

BUILDING IT UP!

Q: I have two questions: 1. I have a known outside tire diameter that I want, but I can't find anyone who will tell me (sell me) the tire size and wheel diameter (for a 1974 Super Beetle) that will give me that dimension. Do you have any suggestions?

2. Back in the day, I used to build engines for my street cars (mostly Chevy) and it was simple. Now, as I have been reading in your magazine (and others), it seems to have developed into a real science of performance. Can you tell me (or point me to someone who can) what I should do to a properly dated 327/300-hp that needs a total rebuild in order to make it work in my 4,700-lb 1966 C-20 that I use regularly for daily driving? I still have some 18-year-old left in me!

I am the third owner of this Camper Special (which means that it has a long bed, $\frac{3}{4}$ -ton suspension, eight-lug wheels and floating axles) and it has 135,000 miles on it with a stock 283 and SM-420 heavy-duty four-speed. It had a 4.57:1 rear that I changed to a 1972 $\frac{3}{4}$ -ton 3.53:1 gear, and I am running 30 $\frac{3}{4}$ -inch-diameter tires that I want to keep. It turns 2,000 RPM at 55 MPH. Can I keep the 10.5:1 compression? What cam? Manifold (the engine I'm going to build does not have one)? Carburetor, distributor, etc.?

Herb Flinkman
Via email

A: You have two unique vehicles by today's standards and I am glad to see that you want to use them both. I will answer your questions in the order they were asked.

1. I would measure the offset, lug pattern and roughly the amount of room you have with the Super Beetle and then work backwards. The rim will be possibly harder to find than the tire. Most tire company websites provide all the dimensions for each model they offer, so it will simply be a seek-and-find procedure. You might also check with one of the vendors of reproduction tires, since I know some of them sell tires for vintage air-cooled VWs like your Super Beetle. You may also want to look at some of the VW magazines for rims, since I am very confident that the package you want to run has already been figured out by that community, or at least one that is close enough to your desires.

2. The 327 Chevy is a great engine and seems to have become as rare as hen's teeth these days. Due to the rarity of the engine, I would pull it out and store it and go with extra cubic inches.

My suggestion is to buy a new crate engine from GM. They have a multitude of great engine packages that require nothing more than to add a carburetor before you're off and running. This route will be less expensive than a proper rebuild, it will be a factory designed package, it will be all new and will retain the integrity of the 327. I feel a nice 300 to 350 horsepower 350 Chevy will meet or exceed all of your requirements and will get the truck back on the road in much less time.

Keep in mind that there may be some minor mounting issues such as brackets, motor mounts and flywheel but they can easily be overcome. If it were my truck that is the path I would take. 🍀



By Tom Comerro

Photography courtesy of the manufacturers



HMM PRODUCT TEST: GLASSWORKS METAL CLEANER

Up here in the northern latitudes, the car show season is drawing to a close. Not only have the leaves changed and begun to fall en masse, we've also had a bout of snow showers. Time for our rides to get prepped for a long period of slumber, just as enthusiasts down south and out west are gearing up for their winter show season. In either case, one last, or the season's first, round of detailing keeps your vehicle's exterior protected from atmospheric conditions.

One product that can help is Glassworks Metal Cleaner — a metal polish formulated to work specifically on stainless, aluminum and chrome surfaces — from The Hardtop Shop. From its near paste-like consistency to the pry-top can containing it, the detailer appears to be fairly traditional at first glance. However,

unlike other polishes, its pink hue is devoid of a strong odor, making it easy to work with, both in ventilated or enclosed work areas.

To test the merits of Glassworks, we pulled a slightly used but grungy outside rearview mirror out of a pile of swap meet parts. Without any advanced cleaning effort, we worked the polish onto some of the chrome surface in a series of circular motions, and soon noticed the rapid color change from pink to a darker shade of gray — a good indication that it was working as designed.

In just five minutes Glassworks' cleaning and polishing abilities produced a superbly positive result in our books. A second application ensured that even the most stubborn of muck was eliminated and further enhanced the chrome's original mirror-like finish. — **Matthew Litwin**

Cost: \$15

Contact: Glassworks, The Hardtop Shop; 877-838-8677; www.thehardtopshop.com



CAMARO CONNECTIONS

You might be able to salvage the old, tattered wiring harness from your classic F-body with a bit of work, but is it worth it? Now Painless Performance stocks a complete 1969 Camaro harness, featuring 26 circuits with virtually every connector installed on the harness out of the box, which also offers some upgrades. The harness has all common options and even includes a fully integrated ground circuit. If you are adding factory-style options, harnesses are also available for the RS taillights, cowl hood and even a complete console harness. Installation is aided with a 120+ page manual full of color schematics, photos, and step-by-step instructions. All exterior lights have the correct sockets pre-installed, and new bulbs are included. Cost: \$799.

Contact: Painless Performance, 800-423-9696, www.painlessperformance.com

MULTI TESTING

Not many car owners give

much thought to brake fluid condition, nor to testing it. Engine coolant gets a little more respect, but is also often neglected.

Phoenix Systems has done a lot of development work in fluid testing over the years, creating products that allow for simple and effective evaluation of fluid condition. Now the company has launched a new double-ended test strip for evaluating the condition of your brake fluid as well as the quality of your engine's coolant. This is particularly useful for shops and service centers, as techs can ensure that every vehicle that enters the shop leaves with fluids that are up to spec. The BrakeStrip provides a visual indication of brake fluid health, alerting you to brake fluid copper corrosion levels that can be harmful to your braking system. Likewise, the CoolantStrip provides a visual alert that can help avoid premature failure or overheating of your engine. Cost: \$99 (100 strips).

Contact: Phoenix Systems, 888-749-7977, www.brakebleeder.com



TOOL TALK

The latest addition to the broad line of

GearWrench tools is the new 120XP Universal Spline XL Ratcheting Wrench set. This four-piece metric set features double-stacked pawls that deliver 120 positions and a three-degree swing arc. They have narrow ratchet-end width and thickness allowing you to reach fasteners in tight spaces. The universal design will allow you to work on several different types of fasteners, including: spline, 12-point, 6-point, e-Torx, square and rounded 6-point. The bright chrome finish and highly visible recessed color markings make it easy to identify which wrench you need. Other sets are available. Visit GearWrench's website for more information. Cost: \$161. Contact: GearWrench, 800-621-8814, www.gearwrench.com

BOSS AND GT500 BRAKE UPGRADES

Owners of late-model performance Mustangs like the Boss 302 and Shelby GT500 can improve braking beyond the factory setup with the EradiSpeed rotor upgrade kit from Baer. The kit is intended for the 2007-'12 Ford GT500 and Boss Mustangs, and is now available in separate front and rear kits. The 14-inch diameter rotor is a two-piece design that is slotted and drilled and also has directional cooling vanes to aid heat dissipation and reduce brake fade during extreme use. As a bonus, the zinc plating helps keep corrosion away. Both front and rear kits include all necessary mounting hardware to fit factory spindles, calipers and pads. The installation also does not require you to bleed the brakes. Cost: \$645.

Contact: Baer Inc.,
602-233-1411,
www.baer.com



NOVA CLUSTERS

If you're looking to add some enhancement to your Chevy II's interior, Bob's Nova now offers full sets of gauges in a variety of different styles. These complete sets of analog gauges are designed to fit the 1963-'65 Chevy II and Nova. Each cluster includes a speedometer, odometer, tachometer and water temperature, oil pressure, fuel level and voltage gauges. Color combinations include black, white or gray backgrounds, white, green or black lettering and white, orange or black pointers. Each cluster will fit in the original dash bezel, or you can purchase a new bezel. Cost: \$906.88; \$89.88 (new bezel). Contact: Bob's Nova, 888-396-6682, www.bobsnova.com



CHROME COVER

ProForm Parts introduces a little something to dress up the look of your engine bay with its Slant-Edge rocker covers for center-bolt small-block heads. Featuring recessed/raised emblems similar to the look of Gen 1 and LS covers, increased internal clearance is one of the distinctive features of this new tall rocker cover. The center-bolt cover will fit 1987-up, pre-LS Chevy small-block engines. You can choose from seven varieties of raised or recessed Chevrolet and Bowtie emblems, or no emblems at all. Comes with a removable baffle as well as grommets and mounting bolts for installation. Cost: Starting at \$300. Contact: ProForm Parts, 586-774-2500, www.proformparts.com



TRUNK TIME

Virginia Classic Mustang releases a new fastback bracket assembly that holds the fastback trunk spring bar to the lower center of the trunk lid. The bracket will fit 1965-'67 Mustang fastbacks as well as all 1965 and 1966 Sheldys. Keep in mind, some early 1967 Sheldys with metal-framed trunk lids can also use this bracket. The assembly comes with the proper size mounting screws and rubber insulator and mimic those that came out of the factory. The rubber insulators are available separately but are in limited supply. Cost: \$16.95. Contact: Virginia Classic Mustang, 540-896-2695, www.virginiaclassicmustang.com

RACE FUEL CONCENTRATE

Tired of hauling around jugs of racing fuel

to keep your high-performance machine properly fed? Now JEGS has a new product that is said to take ordinary pump gasoline and transform it into high-octane, track-grade racing fuel. The new fuel concentrate — formulated by Race Gas — adds key elements of racing fuel to regular pump gas such as hydrocarbons, oxygenates and organometallic compounds. The company says two ounces of Race Gas will raise the octane of one gallon of gasoline four full octane numbers (40 points of octane). The concentrate is capable of increasing gasoline up to 107 octane. Safe to use in race cars, passenger cars, motorcycles and more. Not for use in aircraft of any kind. Cost: \$29.99 (32 oz.).

Contact: JEGS,
800-345-4545,
www.jegs.com



WHAT WONDROUS NEW MACHINES

Extraordinary Creations at 2015's Race of Gentlemen

Before the advent of the Oldsmobile and Cadillac overhead-valve engines of 1949, the Chrysler Hemi of 1951 and the ubiquitous small-block Chevrolet of 1955, hot rodding was overwhelmingly based around Ford parts. Even when the chassis or drivetrain from another make was chosen, frequently the small, light, mostly steel body of a Ford roadster was used for coachwork. Today, vintage-style hot rodding is probably even more Ford-centric, with late '20s and early '30s Ford bodies and chassis powered by hopped-up Ford flathead fours and V-8s dominating the scene.

It would be patently untrue to suggest that we're in any way tired of the classic T, A or '32; but it's definitely exciting to see something outside the ordinary built in the venerable style of the interwar and early postwar era. This year's Race of Gentlemen had plenty of atypical creations to



titillate even the most jaded spectator. Everything from touring cars and sport coupes to stripped-down buckboard-like creations ran alongside the classic roadsters and coupes. But some were even more unusual, because of the mechanical components they employed, their bodywork or the combination of parts.

To that end, we did a survey of some of the oddballs in attendance at this year's Race of Gentlemen and picked out a sampling to share with you on

these pages. Notably absent here are the *White Phantom* 1934-vintage sprint car, which has appeared in our coverage in the past; George Brehmer's 1926 Chevy roadster and Mike Santiago's John Gerber-influenced speedster, both of which didn't attend due to scheduling conflicts arising from Hurricane Joaquin; and Peter "Pedro" Hendrickson's supercharged, F-head 1931 De Soto coupe, which was prevented from embarking on its road trip from Montana due to mechanical issues.

V-8 Belly Tanker

MIKE BARILLARO; KNOXVILLE, TENNESSEE

Finally, someone built a belly tanker to run at TROG! Mike Barillaro, a veteran of the race and owner of Barillaro's Speed Emporium in Knoxville, Tennessee, explains, "I was really trying to make it look like it was built in the late '40s, early '50s."

Though Mike just shrugs when he talks about them, there were challenges to constructing the kind of streamliner that Bill Burke pioneered in 1946. The first was tracking down the bomb-shaped fuel tank carried by P-38 aircraft during World War II that would serve as the car's lightweight and aerodynamic body. Due to the rarity of original tanks, Mike had to settle for surplus dating to the early Sixties.

While the streamliner's Ford flathead is fairly stock, save for adjustable lifters and a mystery cam, cooling it proved another challenge. Mike's solution was a "water-tank" setup—a radiator inside a steel tank filled with water—located behind the driver's seat. Weight is kept to a minimum by using Model T side rails with a 1940 Ford front axle and a '35 banjo rear axle pulling double-duty as cross members. A 1948 side-shift transmission and 4.11 gears deliver the power, while the belly tanker is kept on target with a 1940 cross-steer box. A roll cage and push bar wink at potential future exploits.



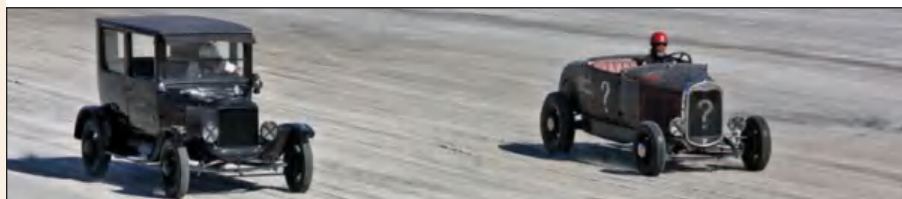
1924 Ford Model T Tudor

DAISUKE KODA; TOKYO, JAPAN

Just as many readers no doubt came to enjoy muscle cars thanks to Mattel's Hot Wheels line, it was a '30s-vintage Marx *Leaping Lizzie* wind-up toy car that inspired the '24 Ford you see here. Daisuke Koda, owner of Glad Hand & Co. apparel company in Tokyo, is a retrophile, car enthusiast and toy collector.

Though Mr. Koda is quick to tell you his T is "nothing special," those who saw it run down the beach are aware there's more to it than meets the eye. Under the stereotypical "collegiate jalopy" skin resides a 1949 Ford 8BA flathead V-8 bolted to a C-4 automatic putting power to a Winters banjo-style "no change" rear axle. Disguising all this are early Ford V-8 wires with painted hubcaps and Model A pieces attached in the center. We didn't even realize they weren't Model A wheels until we got home and looked at the photos.

This "tin you love to touch" was assembled by Mr. Waki at Side Motors Japan, and from the big grins worn by Mr. Koda and friends all weekend, "a rattling good time was had by all."



1927 Whippet boattail

JIMMY ALLEN; GOODYEAR, ARIZONA

When a car has been together in a single form since 1935, it can be tough to nail down some of the technical details. But when you're viewing a time capsule, it is best to blend the stories passed down with the car along with some careful observation.

The story on this car, *The Leo Montin Speedster*, is that it is the front portion of a 1927 Whippet joined with the boattail rear of a Nash atop an inverted Ford Model T frame. The side rails might indeed be Ford, but those front and rear crossmembers appear to be from Whippet's forerunner, Overland. The axles fore and aft are definitely Ford, although the unique rear spring setup also appears to be Overland derived. The flathead four-cylinder powerplant comes from another independent maker of the 1920s—Durant's Chevrolet / Ford competitor, Star. Between the Ford banjo and the Star banger is a full-synchro three-speed that began life in a 1931 Packard. Finally, while not making things any faster, the handsome instrument cluster from a circa 1932 Nash caught many an eye.

Ford Twin-T

THE OILERS CAR CLUB/CRAFTSMAN

Craftsman came to TROG last year and

decided it wanted in for 2015, so it enlisted automotive television program host and women's land-speed-record-holder Jessi Combs as driver and The Oilers CC/MC as builders. Headed up by Oiler Sean Brayton, they set out to build a car inspired by Ford's Model K racer. The Model K was an especially appropriate choice because in 1905 and '06 it raced on beaches in Florida at Ormond-Daytona, as well as in New Jersey at Cape May, just south of Wildwood.

Sourcing an appropriate six-cylinder engine would be next to impossible, so Sean came up with another solution: "I had seen twin-engine Ts in the past," Sean explains, "and thought it would be a fun way to make it almost look like the Model K six." The engines were built by Max Herman Jr. at H&H Antique Ford in La Crescenta, California, and are stroked with high-compression heads fired by a single V-8 distributor. Don Lang of Lang's Old-Car Parts in Baldwinville, Massachusetts, helped select the best used parts from his substantial inventory.

"Timing and tuning," says Sean, "took some thinking, because it's one ignition but two intakes. Once the rear motor was tuned in, we attached the front motor 90 degrees out of TDC, and that was that."



THE HENRY FORD



1928 Chevrolet roadster

SEAMUS SKEUSE; STOCKTON, NEW JERSEY

We're cheating a bit with this one.

Seamus Skeuse built his '28 Chevy for TROG, but wasn't quite where he needed to be to apply as a competitor this year. Nevertheless, he managed to get his roadster on the road in time to drive down to the beach as a spectator. Specifically, that road was the one between his hotel and the race track!

The Chevy is being built as an homage to the dry lakes car built by the Miller Brothers (Zeke and Larry, older brothers of the legendary Ak Miller) before World War II. So far, the engine is stock, and Seamus has focused on getting the car to look and sit right using all reconfigured original parts (other than the 17-inch and 19-inch wire wheels from slightly later Chevrolets). A three-inch dropped axle has the front sitting right, while the back came down courtesy of reversed main leaves on the springs.

Currently, Seamus is working on a twin-carb setup under that hand-formed aluminum hood, followed by a counterbalanced crank, '37 Pontiac pistons for compression and maybe a three-port Oldsmobile head.

Overland-Whippet speedster

BOBBY GREEN; LOS ANGELES, CALIFORNIA

While prewar-era performance parts are hard to come by, aftermarket racing bodies are as rare as hen's teeth because they bore the brunt of the deadly scuffling of early speedway racing. That makes TROG co-presenter Bobby Green's Whippet speedster a doubly remarkable instance of serendipity.

A while back, Bobby purchased a "mystery" overhead-valve conversion made by Alexander, which he knew was too small for the company's usual Ford applications. A year passed, and then an old speedster was found in a barn in Minnesota. Outfitted with a four-cylinder Whippet engine, its streamlined "speedway" body was made by Faultless, and it rode a narrowed Overland frame. After Bobby purchased it, he made a discovery. "It occurred to me," Bobby recalls, "that the 'mystery' Alexander overhead conversion that I had bought a year prior just might fit. I grabbed it off the shelf, set it on top, and voilà! Mystery solved!"

Producing .24 hp per cu.in., the Whippet's lightweight full-pressure engine—especially installed in this speedway body—would have made for a nimble and fairly durable racer in the day. Now outfitted with his more efficient OHV, Bobby says it's "ready to make a new chapter in its racing history."



BOBBY GREEN



1926 Ford T/V-8 modified

JIM LOUGHLIN; JAMESBURG, NEW JERSEY

TROG is a fairly rare event, in that

historic cars and motorcycles stage next to newly constructed "could-have-been" racers, making for an inspiring environment, and some truly unique builds. Jim Loughlin's modified—which we've taken to calling *The Silver Slipper* due to its bare-metal, radiator-less, wind-slipping shape—is a perfect example.

With a narrowed 1926 Model T frame; an aluminum body, which Jim hand formed in his shop, Ray's Hot Rods; and no conventional cooling equipment, the emphasis was on minimizing weight. The engine temperature is kept down—and horsepower is increased—by running a mixture of mostly methanol, which burns cooler and also has a chilling effect as it's drawn into the engine.

Set back significantly to better balance the car, the 239-cu.in Ford V-8 is equipped with three Stromberg 97s modified for alcohol, Edelbrock heads, an 11-lb. flywheel and an Isky 433 camshaft. "The 216 car is so fast, I never had to use full power. I was so far ahead I just cruised the second half of the track." Jim's *Silver Slipper* was so fast, indeed, that he cruised all the way to a class win.

By Bob Bracken with Ed Heys
Photography courtesy of Bob Bracken

CAR CULTURE IN JERSEY

Weekend races at the track—car repairs performed on the street

I purchased a Wimbledon White, black interior, 1966 Fairlane GTA new from Petrucci Ford in Passaic, New Jersey, in August of 1966 for \$2,750. It had no power options, but as a GTA of that year, it came equipped with a 390-cu.in., 335-hp engine and a C-6 automatic transmission. I opted for the automatic version of the GT as my wife, Bev, was going to be the primary driver during the week and she would use the car back and forth to work.

Mammola Ford in Lodi, New Jersey, had an identical car except it was equipped with power steering and power brakes. After much consideration, I foolishly decided on the car without the power options, as I considered the amount of horsepower it would take to operate the power steering pump, along with the added weight of both of these options. That was a big mistake on my part, as the Fairlane was not all that easy to steer with the Firestone Wide Oval tires and the big FE out front! It was fine for me, but it wasn't so great for my wife while trying to park on 21st Avenue in Paterson, New Jersey.

Anyway, to make this purchase work I had to sell my 283/270-hp, four-speed 1957 Chevy 210 two-door sedan, which

was my daily driver, and take over Bev's white, 1955 Chevy Bel Air, two-door hardtop, V-8, stick-shift car as my to-and-from-work driver. I really didn't mind making the switch, as the little '55 was a great running and driving car with its 1962 283-cu.in., two-barrel engine.

On many weekends, the Fairlane was used as a tow vehicle for a drag-race car. Its job was to pull a '65 GTO, 389/360-hp, four-speed to Island Dragway in Great Meadows, New Jersey, and/or Old Bridge Township Raceway Park in Englishtown, New Jersey, where my brother-in-law and I would race the Goat.

At times, while the D/Stock GTO was cooling down, I would run the Fairlane in F/PS (Pure Stock).

On my first run down the quarter-mile with the GTA, I elected to shift the gears manually, which netted an E.T. of 15.2. I don't recall the MPH, but what I do recall is that on my second run, I let the

C-6 shift itself through the gears, netting an E.T. of 15.0! That was quite a surprise to me, and it taught me about staying within the "power band" and not over revving, which is most likely what I did while manually shifting. Obviously, the transmission governor was better at this game than I was!

We owned that Fairlane for five years, eventually selling it to my brother-in-law in September of 1971. Other than the yearly replacement of mufflers, it was a great car, and I miss it to this day!

What became of the Fairlane? Well, on my brother-in-law's wedding night, two or three weeks after he



Bob and Beverly Bracken have enjoyed owning several cool cars, including a '57 Chevy 210 sold for \$425 to finance a new '66 Fairlane GTA for \$2,750. Below, the Fairlane and a '65 GTO were raced regularly at Island Dragway and Englishtown. Opposite: The fiberglass-fendered, ex-B/Gas '55 Chevy sedan in the background was purchased for \$30 sans engine/transmission.



bought the car from me, a drunken friend of his cracked it up. It was repaired, but it was sold shortly afterward, and the last I heard it was on a used car lot on Rt. 23 in Pequannock, New Jersey, never to be seen again—at least not by me.

Through the years, I have owned four other Fairlanes. At one point, we were a

two-GT Fairlane family when I purchased a '66 GT four-speed, which I bought in 1968 for the whopping sum of \$600. All it needed was a right rear quarter panel. The parts to fix it came with the car, and I installed the quarter panel myself, on the street, in front of my house. That's how things were often done back then for me and my friends.

In my relentless search to replace my original '66, I did own two more '67 GTAs, and most recently a '66 289-cu.in. that I converted from a C-4 automatic to a five-speed. They were all good cars, but none had the same allure to me as that Wimbledon White '66 did. I guess none really ever will.

I often wonder if my original car is still out there. Could be, but I guess I'll probably never know for sure. 🚗

Do you have photos of your favorite or former muscle car and an interesting story to tell? Please submit digital images (or photographs), your memories, and contact information to Muscle Car Scrapbook, c/o Hemmings Muscle Machines, attention: Ed Heys, P.O. Box 2000, Bennington, Vermont 05201, or e-mail Ed Heys at eheys@hemmings.com.



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\$10.2 million

TOP MUSCLE CAR SALE:

1965 Shelby G.T. 350:

\$313,500 (world record)

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DATE: January 28-31, 2016

LOCATION: Scottsdale, Arizona

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LEGEND

CONDITION:

1=Excellent; 2=Very Good; 3=Average;
4=Poor; 5=Major Project

RESERVE:

Minimum price owner will accept

TOP BID:

The highest offer made
(but vehicle did not sell)

SELLING PRICE:

What the vehicle sold for

AVERAGE SELLING PRICE:

Average market value of vehicles
in similar condition

\$10.2 million in sales, including a world-record-breaking Shelby G.T. 350

Words by Jeff Koch

Photography by Jeff Koch and Terry Shea

Russo and Steele's annual affair in Monterey, California, was held at Fisherman's Wharf in downtown Monterey on August 13-15, 2015.

Three days' worth of effort, starting in the afternoon and moving on into the night, netted \$10.2 million in total sales—not quite the \$12.07 million that the house saw in 2014, but still respectable considering the amount of American iron on hand, and the number of folks looking for machines from overseas. A total of 210 lots were offered, with 129 selling, for a 61

percent sell-through rate. The average sale was just over \$79,000—again, down from 2014's \$115,000 average sale. The top muscle car sale was a world-record result for a '65 Shelby G.T. 350, at \$313,500—although American performance also showed strongly in the rare Hemi-powered 1958 Dual-Ghia convertible, which sold for \$412,500.

As per usual, Russo and Steele does not release top bids for unsold items. All pricing includes the 10 percent buyers' premium.



BUICK

Year: 1973 **Reserve:** None
Model: Riviera GS **Selling Price:** \$21,725
Condition: Refurbished/#2- **Avg. Selling Price:** \$11,000

Well, here was a delightful surprise. One of just 728 Stage 1 '73 Rivieras (see our Buyer's Guide on page 36), and one of just 60 in Regal Black, this car had recently (and allegedly) been the subject of a ground-up restoration. Re-chroming wasn't in the budget, though, judging by the condition of the bumpers; and those classic Buick road wheels were wearing the cheapest no-name white-stripe radials imaginable. But the body was straight, and the interior was impeccable, and, frankly, when is another Stage 1 Riviera going to turn up? It sold for double the average, but despite what the book says it still seems well-bought.



FORD

Year: 1970 **Reserve:** None
Model: Mustang Mach 1 **Top Bid:** N/A (Not Sold)
Condition: Restored/#1- **Avg. Selling Price:** \$50,000

This was a headscratcher. A no-reserve R-code Mach 1 from the Thomas Scott collection — and one of the nicer examples we looked at from that collection as well — that has no reported sales result. Yeah, a no-reserve car that didn't sell. What happened? The Acapulco Blue paint was cleanly applied, the engine and interior looked fresh — indeed, only the appearance of late-model white-letter performance radials were amiss to our eyes — and a factory R-code 428 with Shaker hood should have gotten at least some looks.



DODGE

Year: 1969 **Reserve:** None
Model: Coronet R/T convertible **Selling Price:** \$34,650
Condition: Restored/#2 **Avg. Selling Price:** \$39,000

One of just 203 '69 Coronet R/T convertibles built, and the only red-on-red example with power windows known to exist. The catalog called it a "Coronet 440 RT" even though the Coronet 440 model didn't offer a convertible in 1969; rather, this was a Coronet R/T convertible with a 440 under the hood. Body, interior and engine compartment all were more than presentable, but the pitted chrome around the taillights and the itchy stainless trim around the windows were something a future owner may want to address.



BUICK

Year: 1967 **Reserve:** None
Model: GS 400 convertible **Selling Price:** \$30,250
Condition: Restored/#2 **Avg. Selling Price:** \$32,000

Part of the no-reserve Thomas Scott collection, this soft-top GS 400 had been restored almost completely back to trim-tag and window-sticker correctness. The bench-seat, column-shift convertible was lovely, with lustrous gold paint, an interior that had barely seen seat time, and a clean under-hood area that showed off the red Buick mill and the "Star Wars" air cleaner. This one had the four "Rs": repainted, rebuilt, restored and R134a air-conditioning conversion. The catalog suggested "no known rust" ... but if this car was completely restored, wouldn't someone have seen it?



CHEVROLET

Year: 1966 **Reserve:** None
Model: Chevelle SS 396 conv. **Selling Price:** \$50,050
Condition: Restored/#2 **Avg. Selling Price:** \$48,000

Here's one that ticked many a muscle nut's boxes: big-block power, four-speed transmission, a top that goes down and a bright color that would get you noticed by all you might rumble past. Only when they got closer would they have noticed the paint chips around the hood opening, or decided that the big-n-little Chevy Rally wheels on staggered-width late-model radials and that tach that was semi-hidden under the dash, lent more of a street machine vibe than a serious restoration. Still, this Chevelle managed to beat its average sale.



SHELBY

Year: 1966 **Reserve:** Undisclosed
Model: G.T. 350H **Top Bid:** N/A (Not Sold)
Condition: Restored/#3 **Avg. Selling Price:** \$111,000

Russo & Steele's own catalog spelled out most of the issues: "The original configuration of this particular car is unverifiable" and "was refitted with the body of an early 1965 fastback." With a unit-body car, the body is rather more than the sheetmetal that you see. Everything looked clean enough, but mix in non-Hertz Shelby wheels and even-later white-letter tires, and you've got a car that suggests "fun cruiser" rather than "serious investment potential." Perhaps the seller was hoping Monterey would bring the latter. Alas, it remained unsold.



PONTIAC

Year: 1965 **Reserve:** Undisclosed
Model: GTO convertible **Top Bid:** N/A (Not Sold)
Condition: Restored/#1 **Avg. Selling Price:** \$84,000

The odometer read 53,000 miles, but you'd have been hard-pressed to tell. A pre-2000 restoration that has held up very well in the intervening decade and a half, this Blue Charcoal Goat ragtop sported the four-barrel 389, parchment interior, a Hurst-shifted four-speed, Rally I wheels, a power top and a full ownership lineage from new. There wasn't even any patina, which you'd expect from an aging restoration like this one. Adding a four-speed boosts the convertible's value by a whopping 15 percent on average.



PONTIAC

Year: 1972 **Reserve:** Undisclosed
Model: Le Mans Sport conv. **Top Bid:** N/A (Not Sold)
Condition: Refurbished/#2 **Avg. Selling Price:** \$22,000

Not a GTO, but not a problem, as the Le Mans Sport offered 400-cubic-inch Pontiac power. A recent refurbishment in red ("Resale Red"?) left the body looking sharp, and the tan interior was clean also, with no aftermarket radio or under-dash gauges to muck up the look. The engine, on the other hand, had the appearance of a regularly driven mill that could stand more than a gentle freshening. Everything was there; it just didn't feel as fresh as the rest of the car looked. Acceptable for a driver, less so for something expected to be of collector quality.



OLDSMOBILE

Year: 1970 **Reserve:** None
Model: 4-4-2 convertible **Selling Price:** \$39,600
Condition: Restored/#1- **Avg. Selling Price:** \$42,000

"Numbers matching!" "Fully frame-off rotisserie-restored to exacting specifications!" "Extensively documented over the course of a decade!" "Huge binder of documents and receipts!" "Spent \$1,000 to rebuild the factory radio alone!" Indeed, the body lines on this Burnished Gold 4-4-2 were perfect, and everything inside and under the hood also seemed to be in order. But, with hype like this, why were there paint chips dotting the hood edge? How was that not sorted before the sale? And how come the white-letter radials looked like they'd already seen 10,000 miles?



PONTIAC

Year: 1970 **Reserve:** Undisclosed
Model: GTO Judge **Top Bid:** N/A (Not Sold)
Condition: Restored/#1- **Avg. Selling Price:** \$110,000

"INVESTOR QUALITY" (caps not our emphasis), said the paperwork. This Ram Air III four-speed car sported a mostly original interior (though those hanging gauges weren't factory), an odometer reading less than 15,000 miles, a recently refreshed Atoll Blue body that was straighter than the factory ever could have dreamed of, an antiseptic engine bay, PHS documentation and a set of big-n-little white-letter radials on larger-than-stock Rally II wheels. We know that Judges were little more than a stripe package and an engine that was optional elsewhere, but the pricing average more than doubles for a real Judge. So, investor quality? Maybe. Just not here.



FORD

Year: 1970 **Reserve:** Undisclosed
Model: Mustang Boss 302 **Top Bid:** N/A (Not Sold)
Condition: Original/#2- **Avg. Selling Price:** \$70,000

It wasn't perfect, but an unrestored example with just 38,000 miles on the clock likely won't be. Indeed, fading stripes, a bright color that somehow refuses to pop and some rocker dents were all in evidence, but some paint boogers on the lower fenders gave us pause to wonder just how unrestored this particular example actually was. We know that unrestored cars are all the rage these days, and frequently see a premium paid above the average, but even with its racing-homologation provenance, this Boss didn't get the necessary love to find a new home.



PONTIAC

Year: 1978 **Reserve:** Undisclosed
Model: Firebird Trans Am **Top Bid:** N/A (Not Sold)
Condition: Original/#2 **Avg. Selling Price:** \$22,000

A W72 Trans Am four-speed was the hottest American car you could get in 1978 short of a Corvette, and second-gen Trans Am prices have been on the rise. A survivor car with just 23,000 miles on the clock and full PHS docs to prove its provenance, this W72 four-speed car also sadly had a period set of 6 x 9 Jensen speakers cut into the parcel shelf. But mostly it was under the hood where this particular Trans Am showed its age: It looked like an untouched 23,000-mile engine bay — not crusty and forlorn, but hardly crisp and new either.



CHEVROLET

Year: 1969 **Reserve:** Undisclosed
Model: Camaro Z/28 **Top Bid:** N/A (Not Sold)
Condition: Restored/#2 **Avg. Selling Price:** \$60,000

Is it just us, or have we been seeing a lot more GM of Canada cars turning up with documentation in tow? This one, said to be a real Z/28 with GM Canada docs and a complete numbers-matching driveline, showed plenty of signs of driving and use: peeling underhood decals, some paint boogers in the drip rail, gauges hanging under the dash, the nose-in-the-weeds stance and even the painted-on, clear-coated-over striping suggested more street machine than serious collector car. A fun driver, but fun-driver '69 Camaros can be had cheaper than the \$60,000 average for a real Z/28.



FORD

Year: 1969 **Reserve:** Undisclosed
Model: Mustang Mach 1 **Selling Price:** \$82,500
Condition: Restored/#1 **Avg. Selling Price:** \$57,000

You could take our random sampling and note that most of what did sell were no-reserve cars. You could look around at the number of unsold lots and conclude that Monterey isn't a muscle car kind of venue. Ladies and gentlemen, meet the outlier of our group: an unrestored Champagne Gold Mach 1 Mustang sporting a 428 with 3.91 Drag Pak gearing, automatic transmission, Shaker hood and a deluxe Marti report documenting it all. Not a no-reserve car, it looked as close to perfect as we've seen. Perhaps the crowd was just waiting for the right car to go crazy for?



SUNBEAM

Year: 1967 **Reserve:** Undisclosed
Model: Tiger Mk I convertible **Top Bid:** N/A (Not Sold)
Condition: Restored/#2 **Avg. Selling Price:** \$51,000


Here was a conundrum. This late Mk I Tiger, built May 1966 but sold as a '67, looked really terrific. Clean from all angles, with straight bodywork, a show-worthy 260 under the hood, an interior that seemed barely sat in. It was what you'd hope for from a fresh restoration. The problem? We'd guess that it was the decidedly non-stock paint color, a sort of bluish purple that seemed a good deal more '90s than '60s. It's not like there was no interest in Tigers: A Mk II at the same event sold for \$181,500. Neither full custom nor completely stock, this one failed to sell.



CHEVROLET


Year: 1964 **Reserve:** None
Model: Malibu SS convertible **Selling Price:** \$33,500
Condition: Restored/#1- **Avg. Selling Price:** \$35,000

A 283/Powerglide combo in a convertible makes for effortless summertime cruising, even though it's not the most potent powertrain that was available in the Chevelle's debut season. Everything here presented clean and correct, not over-restored and overwrought. Straight refrigerator-white body, fresh red vinyl interior, unblemished chrome inside and out, and an engine bay full of correct finishes were all ready to greet the new owner. Money paid was within 10 percent of book value, so no one should have been disappointed with this one.




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By David Conwill



DARIN SCHNABEL / RM SOTHEBY'S

RM SOTHEBY'S HERSEY SALE INCLUDES SEVERAL MUSCULAR MACHINES

While the AACA meet at Hershey, Pennsylvania, is known for largely attracting antique cars, that doesn't mean there wasn't something for the muscle enthusiast at RM Sotheby's concurrent auction. The sale, held October 8-9, brought in \$16,344,387 overall, with 96 percent of all lots sold.

The top-selling muscle machine at Hershey was a red-on-red '63 Corvette coupe with a 340-horse 327 and a four-speed. Advertised as having only a few miles on it since restoration, the originally Silver Blue split-window went for \$77,000.

An unusual find was a 1958 Pontiac Parisienne convertible that sold for \$72,000. The Parisienne

was Canada's equivalent to the Bonneville and was essentially a Chevrolet Impala trimmed as a Pontiac. Also like the Impala, the Parisienne could be ordered with a triple-carbureted, 280-horsepower, 348-cu.in. big-block V-8. This one was, and the 348 was lashed up to a floor-shift four-speed, making for some rare muscle.

There was no convertible version of the Plymouth Fury offered in 1956, so if a buyer wanted a muscular engine in an open car that year, he was limited to the Power Pack version of the 277 V-8, making 200 horsepower with a four-barrel carburetor and dual exhausts. The 1956 Belvedere ragtop that sold for \$68,750 at Hershey was so equipped.

The hottest Chevrolet available in '56 was the Corvette equipped with the 225-hp, dual-quad 265-cu.in. V-8 and a close-ratio three-speed. That's exactly the combination that grossed \$66,000 at RM Sotheby's Hershey sale.

After experimenting with Packard's 352-cu.in. V-8 in 1956, Studebaker returned to its own engines and combined its 289-cu.in. V-8 with a supercharger for the 275-horsepower 1957 Golden Hawk. One of those Golden Hawks, blower and all, brought in \$52,250 at the sale.

Other lots with muscular potential included a 1958 Dodge Custom Royal Lancer equipped with a 350-cu.in. B-series V-8 that went for \$66,000, a 1956 Ford Thunderbird sporting its original pink paint that sold for \$44,000, and a 1963 Studebaker GT Hawk that changed hands for \$27,500.

The RM Sotheby's 2016 auction season will begin at the Arizona Concours d'Elegance in Phoenix, Arizona, January 28-29. For full results from Hershey and further information about past and future auctions, consult rmsothebys.com.



PHOTOS: MECUM AUCTIONS

TEN UNDER \$10,000 AT MECUM CHICAGO

So often there's a rush to trumpet the ever-growing values of collector cars, and lost in the noise is the message that there are still starter cars to be had in the auction scene. Case in point were 10 examples of muscle-y cars that sold below the \$10,000 point at Mecum's Chicago auction held October 8-10 in Schaumburg, Illinois.

A '64 Fairlane might have a spot in HMM if it was a Sport Coupe with a 289, right? Certainly a Thunderbolt with a 427 shoehorned in would. But a four-door? Yeah, according to the auction description, this '64 Fairlane 500 Town Sedan had a '95 Mustang 5.0L V-8 and an AOD where presumably a wheezy 260 and a Ford-o-matic once resided. That means this Dynasty Green sleeper was probably a steal at \$3,250.

If Fox-body Mustangs aren't yet on the upswing of collectibility, it's only a matter of time—especially the 5.0L versions and convertibles. There was an example that had both those features in Chicago that went for only \$3,500. Perhaps the price was kept low because, as an '85, it was carbureted and didn't yet have the multi-port electronic fuel injection that debuted in 1986 or the desirable E7TE heads that came out in '87, but even if it had a 3.8L V-6 or 2.3L four, this was wind-in-your-hair motoring on the cheap.

Third-generation Camaros are probably the least loved F-bodies, but like the 5.0 Mustangs, they make great modified muscle and have good potential as future collectibles. Anyone wanting to get ahead of the curve had a pair of low-dollar lots to choose from, with a

2.8L V-6-powered '87 going for \$4,000 and a 305 V-8-powered '88 bringing \$6,000.

Since '80s muscle was the bargain scene in Chicago, it seems only fair to address the General Motors Excitement Division's most innovative effort of the decade: the Pontiac Fiero. A 1987-vintage example of the mid-engine two-seater, sporting drilled and slotted rotors on all four corners, upgraded wheels and tires and new lowering springs, went for \$4,000.

We were starting to believe that you couldn't get into a clean, two-door, V-8, four-speed GM A-body from the '60s for under \$10,000 anymore, but a '69 El Camino at Mecum Chicago proved us wrong. The 350-powered silver ute went home with someone for only \$8,000.

Fuselage-era Dodge Chargers aren't quite the muscle-car icons their '68-'70 brethren



LOTS WE'RE WATCHING AT THE WORLDWIDE AUCTIONEERS' RON BROWN ESTATE COLLECTION SALE

The late Ron Brown was the founder of Street Dreams classic car dealership in Fredericksburg, Texas, and during his lifetime amassed a notable collection in his own right. By the time you read this, Worldwide Auctioneers will have completed liquidation of Brown's assemblage at an auction held October 23-24 in Fredericksburg. The collection was particularly notable in that it contained four 1963 Corvette split-window coupes.

Worldwide's other highlighted vehicles from the Ron Brown Estate included an unrestored, original-paint 1970 Plymouth Hemi 'Cuda that is said to still sport its original engine and to have accumulated fewer than 17,000 miles since new; a restored 1969 Chevrolet Camaro SS/RS, finished in yellow and black with a 375-horsepower 396; and a 1970 Ford Mach 1 Mustang 428 Cobra Jet, said to be the recipient of a concours-quality restoration.

Other vehicles we're watching are a 312-powered 1957 Ford Ranchero restomod,

driver-type 1963 Ford Falcon Sprint with a four-speed, a Hemi-powered 1970 Dodge Charger R/T that has "little more than a single repaint since new," a 1970 Olds Cutlass 4-4-2 and a 1966 Pontiac GTO convertible.

Next up for Worldwide Auctioneers is the

Houston Classic Auction at the Concours of Texas in Montgomery, Texas, on April 23, 2016. For full results from the Ron Brown Estate Collection and further information about past and future auctions, visit worldwide-auctioneers.com.



PHOTOS: WORLDWIDE AUCTIONEERS

are, but they're plenty aggressive-looking, and they've still got the same good bones as all the other performance Mopars of the time. Taking all that into account, it seems like \$7,000 for the gold, 318-powered '72 that went home with a new buyer in Schaumburg was a pretty good buy.

Other inexpensive lots of interest included a 1979 Pontiac Trans Am for \$7,750, a 1973 Ford Maverick with a 347-cu.in. stroker for \$9,000, and a 1965 Chevrolet Corvair Corsa for \$9,500.

To check out the other results of Mecum's Chicago sale, or to hunt down your own potential bargain among the consignments at Mecum's January 15-24 #WhereTheCarsAre auction in Kissimmee, Florida, head to mecum.com.

AUCTION CALENDAR

JANUARY

15-24 Mecum
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23-31 Barrett-Jackson
Scottsdale
Scottsdale, Arizona • 480-421-6694

27-31 Russo and Steele
Scottsdale 2016
Scottsdale, Arizona • 602-252-2697

28 Bonham's
The Scottsdale Auction
Scottsdale, Arizona • 415-861-7500

28-29 RM Sotheby's
Arizona
Phoenix, Arizona • 519-352-4575

JANUARY

28-30 Silver
Arizona in January
Fort McDowell, Arizona • 800-255-4485

29-30 Gooding & Company
The Scottsdale Auctions
Scottsdale, Arizona • 310-899-1960

FEBRUARY

19-21 Leake
OKC
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19-20 Vicari
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Check dates with auction houses before traveling



1967 CHEVELLE BUCKET SEAT OPTIONS

Q: I currently own a two-door 1967 Chevelle coupe with a front bench seat. I am considering replacing the bench seat with bucket seats. The problem is, really good reconditioned '67 Chevelle bucket seats can be rather expensive. Without having to make significant modifications to either the floor or new seats themselves, what are my alternatives as far as bucket seats from perhaps other GM models? Will later model Chevelle bucket seats fit my '67 (e.g., '68-'72)? I'd also consider any non-OEM options, particularly if they included head rests.

Tom Jacek
Via email

A: Bucket-seat conversion brackets for this type of changeover are available from Auto Metal Direct. Although the bucket brackets on the 1966-'67 Chevelles were wider than the 1968-'72 seat brackets, AMD's GM Restoration Parts-licensed replacements are beefy enough to fit as a weld-in replacement for both the earlier and later design. The brackets are made of coated 18-gauge steel and should be welded in place, after removal of the bench seat brackets and preparation of the floor boards for installation. From a safety standpoint, avoid the temptation to just drill some holes in them and bolt them in place. The four piece set includes the long inner bracket and the small brackets used on the front outer corner. There are existing holes in the original floor pan already for the outer rear seat track bolt. With the use of the proper bucket seat installation brackets, you can install any 1966-'72 Chevelle buckets that catch your fancy. AMD shows a separate part number specifically for 1964-'65 Chevelles as well. Original Parts Group also produces a pair of brackets, made to fit 1964-'72 Chevelle, but they do not include the outer front brackets.

As for aftermarket options, there are

numerous performance seats on the market from multiple suppliers, some that are even designed to have a period look. Many of these seats can be purchased with mounting brackets that are designed to bolt to the vehicle's factory seat-mounting points. You would probably still need to have all four factory-style bucket-seat mounts to use them, but it's worth investigating.

- Auto Metal Direct, 866-591-8309, www.autometaldirect.com
- Original Parts Group, 800-243-8355, www.opgi.com



MUSTANG FASTBACK REAR VENT HOSES

Q: I have a 1965 Mustang 2+2 that I've owned since 1979, and I need some help with it. During an older restoration, no provision was made for the rear air-vent drain hoses to drain out of the vehicle, so now the hoses are just hanging there. Where and how did Ford connect the drain hoses? Also, a Shelby front control arm lowering modification was attempted, and it did not lower the car. The holes that were drilled are not in a flat position with the body reinforcement as the original holes are. I've seen different drilling templates, and I'm unsure of which one is correct. In keeping with the Shelby mod, what would the appropriate coil spring be? What are your thoughts on just reattaching the upper control arms to the factory location and use of a lowering spring?

Ray B.
Via email

A: The drain tube connects to a nipple located on the bottom of the air box, which is about 3/4-inch in diameter. The air box may or may not currently have the bung attached to it where the hose clamps on. If an open hole is all that is there, you will need to fabricate a hose nipple using PVC tubing, a brass 3/4-inch NPT hose nipple or you can tack weld a small steel tube to the OD of the existing hole. The tube and the Corbin clamp that holds it in place are available from several Mustang suppliers, but we have seen some restorers use tubing from a washing machine as well. Once attached, the tube passes through a hole in the metal support located under the box and continues down to the bottom of the rocker panel.

Note that while the well-known "Shelby mod" involved lowering the mounting points of the upper control arms, this was not done to lower the vehicle, and as you've found, doesn't really have that effect. The intent was to alter the camber curve of the front suspension, so that more negative camber would be gained as the front suspension compressed. The idea is that, as the vehicle enters a corner and the suspension for the outside wheel compresses as the vehicle "rolls," the resulting increase in negative camber should help keep the outside tire more square in its relationship with the pavement, aiding cornering grip. In stock form, the outside tire of an early Mustang (and most other American cars of the time) tends to ride on its outer edge during hard cornering—not ideal for performance driving. There's a lot more to this—this is just a basic overview.

For the Shelby upper control arm lowering modification, we recommend the kit produced by Pro Motorsport Engineering, which is available through Tony D. Branda Mustang and Shelby Parts. This kit has the proper drilling template and uses the stock springs during the installation. Branda's also offers a one-inch lowered coil spring for the 1965-'66 Mustang front end, or you can have new coils that are an inch shorter made through Eaton Detroit Springs, if the front-end geometry using the original springs is not to your liking.

- Tony D. Branda Mustang and Shelby Parts, 800-458-3477, www.cobrandamustang.com
- Eaton Detroit Springs, 313-963-3839,

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SAGINAW STEERING GEARBOX ADJUSTMENT

Q: I have unusual slack in a new rebuilt GM 605 steering box. I have checked all front end components, and they are new or good, so it seems to be in the steering box. I have adjusted the left-handed nut on top, but don't know how much you can adjust. Any suggestion? This is on a 1962 Chevy Impala.

Larry McReynolds
Via Hemmings blog

A: Adjustment on the Saginaw 605 steering gearbox calls for the front wheels to be off the ground. This will make it easier to adjust your preload. After centering the steering wheel, loosen the lock nut on the upper end of the Pitman shaft. You can then turn the adjustment screw in until you can feel it bottom out, then back off the adjustment 1/4- to 1/2-turn. Turn the rag joint on the steering shaft or the steering wheel slightly to make sure the steering moves freely at the center point, and also check for binding on either side of the center point by turning the steering wheel and feeling for any resistance. Binding would indicate a worn sector shaft. Retighten the lock nut, and road test the car to confirm that the adjustment solved the problem. If the adjustment is correct, the steering wheel should also return to center on its own when you let go of the wheel. Getting it right where you want it may take a second adjustment—you will know better after the test drive.



SHORTER CHEVROLET STEERING COLUMN

Q: I hope I can get some insight. I have a 1984 Chevy K-10 pickup with a stock tilt wheel, but the column is too long. I am

a big guy and would like to put in a shorter steering column. Can you advise me on what column I can use? I would like to go to a non-tilt and shorter.

George Shiflett
Via email

A: Your current column (and the type used in most 1973-'87 Chevy trucks) is 35-inches long; however, the shorter columns used on earlier model 1963-'72 Chevy trucks will not have the correct provisions for your current ignition switch or turn-signal switch harness. Because your steering system requires the 1-inch "double-D" (also referred to as "DD") splined lower shaft, you are limited in what OE units you can use that are shorter and still have the harnesses for ignition and turn signals. For aftermarket units, you should look at an ididit 2-1/4-inch-diameter tilt column. They are available in chrome, black powder coat or paintable steel, and you can choose from 28-, 30- and 33-inch lengths. All of those options will have the correct 1-inch double-D spline configuration and the self-canceling turn-signal switch. The correct ignition switch and harness you require can be added, as well as wiper/dimmer switch provisions and/or cruise control to customize the shorter column to suit your specific needs.

• Ididit Inc., 517-424-0577
www.ididitinc.com



TORONADO FRONT DISC BRAKE SWAP

Q: I have a 1969 Oldsmobile Toronado that I want to convert from drum brakes to disc. Are there any other cars that can be donors for parts to complete this project?

Fabian Olade
Via Facebook

A: This could turn out to be an expensive conversion project because the offset front-wheel-drive wheels used for Toronados with drum brakes will not clear the calipers on later

disc-brake set-ups. For donor vehicles, we recommend you find a 1969 or '70 Toronado or Eldorado to get the brake booster, master cylinder, proportioning valve, calipers, rotors and wheels.

The spindles and the four-bolt upper ball joints were different on later Toronados and do not match up without changing both the spindles and complete upper control arms. Keep in mind that on the front-wheel-drive cars, you will have to remove the constant-velocity half-shafts from the steering knuckles to perform the swap. This can be troublesome and lead to the need for additional parts, (CV boots, wheel bearings, axle seals, etc.).

Toronados built before mid-1969 did come with optional disc brakes from the factory, but these were four-piston calipers and not as reliable (or easy to find parts for) as the late 1969-'70 single-piston units, and of course the disc-equipped models before mid-1969 also used a master cylinder with a larger bore size and a different proportioning valve. Many of the necessary replacement items for the 1969-'70 brakes are still readily available from auto parts stores as well.

REGARDING OUR RESPONSE TO A READER ABOUT 318 "POLY" ENGINES

I was reading your "Swap Meet" article in HMM #146, October 2015, about Mopar 318 "Poly" V-8 to later 318 LA engine, and just wanted to make sure you are aware that there is a balance issue with the engine rotating mass between the 273/318 and the 340/360 engines. They use a different flex plate/flywheel with external balance requirements. Also, the oil pans are different and not interchangeable (I found that out the hard way).

I have been a subscriber to HMM forever and really enjoy the entire magazine, but I especially enjoy the technical things.

Curt Lawson
Via Facebook 🇺🇸

We welcome any and all questions related to suspension, brake, engine, differential and transmission upgrades.

You can submit them to our Facebook page, www.facebook.com/HemmingsNews or our website where comments can be made at the bottom of dozens of previous Swap Meet articles we have posted there.

You can also email Jim O'Clair at swapmeet@hemmings.com.

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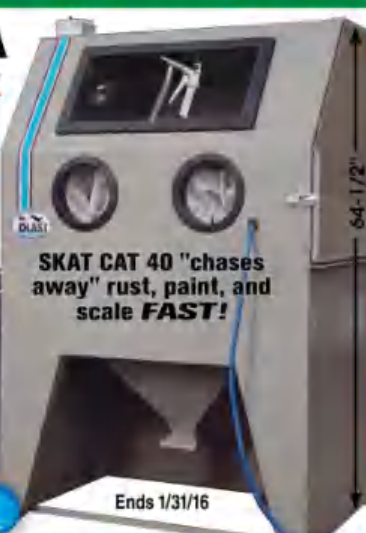
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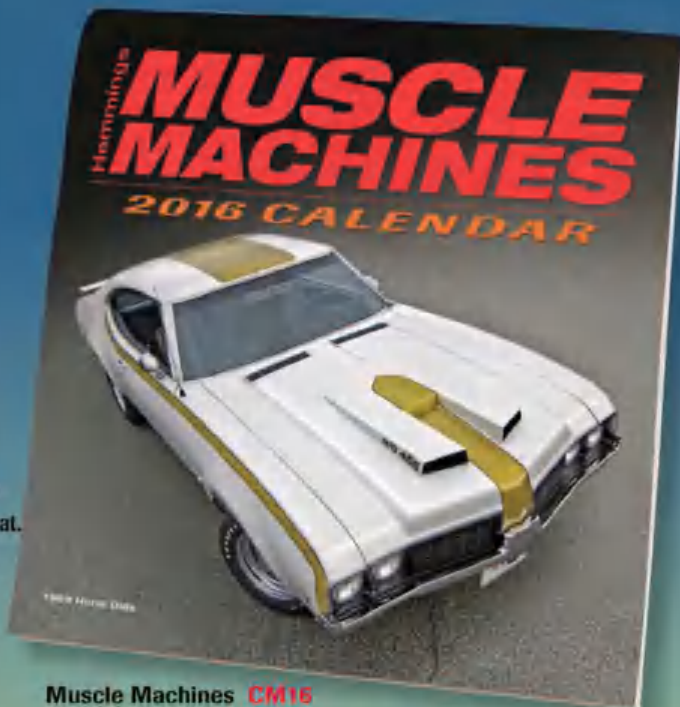
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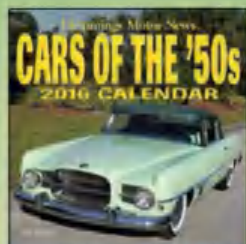
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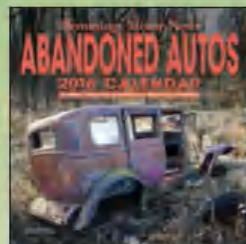
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By Tom Comerro



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January 10 Long Beach Hi Performance Swap Meet Long Beach, California 800-762-9785	January 27-31 Russo & Steele Auction Scottsdale, Arizona. 602-252-2697
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January 15-24 Mecum Auctions Kissimmee, Florida 262-275-5050	January 28-29 RM Sotheby's Auction Phoenix, Arizona 519-352-4575
January 16-17 Auto Parts Swap 'n Sell West Springfield, Massachusetts 860-871-6376	January 28-30 Silver Auctions Fort McDowell, Arizona. 800-255-4485
	January 29-30 Gooding & Company Scottsdale, Arizona. 310-899-1960

HMM urges you to contact event organizers in case of date changes or cancellation. Please note that vendor setup days may be included in the dates listed. To add your event to *Hemmings Motor News* and our website for free, go to www.hemmings.com/calendar for details, or call us at 800-227-4373.



Charity Begins in the Garage

“Would you leave your kid or dog stuck outside in the snow, or Grandma in her rocker, snoozing behind the barn?”

We’ve all seen derelict muscle cars of all makes and models, and in all

states of disrepair, just begging for new homes.

In most cases, the cars are subjected to this suffering due to the procrastination of the owner. On more than a few occasions I have knocked on a front door and asked if I could assume responsibility for a poor weed-encrusted waif in a driveway or parked in a back alley. The answer is usually the same, “Nah, I’m gonna restore that car someday!” My next question, then, is, “How long have you had it?” Usually the reply is something like, “Don’t know for sure; maybe 15 years or so.”

There is nothing more distressing than seeing a topless convertible parked in a backyard buried in snow. Yeah, sure, it could be in a leaky barn, dilapidated carport or cornfield, but the end result is the same. What these folks don’t understand is that they are severely mistreating a potential family member. Would you leave your kid or dog stuck outside in the snow, or Grandma in her rocker, snoozing behind the barn?

I have been a regular attendee of a very large automotive swap meet and car sale here in Southern California since it first started in 1975. It has been both good and bad to me. I’ve bought and sold cars and parts, but all the while something else was happening there that I never realized. It hit me one morning as I read the classic car ads in the Sunday paper. There were a lot fewer local muscle cars for sale than in the past. What the...?!

Then I started to think about all those double-decker car haulers I saw driving out of the swap meet, brandishing Midwest or eastern license plates, loaded with “rust-free” California muscle cars. Car dealers from Asia, Australia and Europe were also there sending cars home to their respective countries. This has been going on for years, and that’s when I realized that all these were potential adoptees, and that there is only a finite number of muscle machines on the planet. They’re not making any of the vintage breeds anymore, and a lot of them still need good homes. Just don’t look in Southern California—our past reserve of adoption candidates has been forcibly relocated around the globe.

I have owned my ’65 GTO since 1984 (before it was fashionable), and it’s now part of the family. Many other muscle cars have passed through the garage over the years, but this GTO has been around for over three decades, and it’s a keeper. Three kids consider it their metallic sibling, my wife thinks of it as a somewhat doted-on rival, and I just plain love it. I think that a lot of muscle cars that were purchased by graybeards when they were new are the primary adoption candidates of today. Boomers with some discretionary income want that Chevelle,

4-4-2 or Mach 1 they owned (or wished they owned) back in the day. I refer to this phenomenon as the “fun factor before the rocking chair” phase.

As the years pass, a muscle car can take on a persona of its own. It might have taken the wife to the hospital for the birth of a child, driven that child in a holiday parade, been loaned to that child to drive to the prom and may now be considered by that child to truly be a family member. And it can act like a family member, too! It gets cranky, won’t work, coughs, quits, moans and groans, just like some of your relatives. But you must consider it a family member to realize all this. A car grows on, up and old with you, and I have known enthusiasts who have actually mourned for a vehicle they stupidly sold in a fit of dementia, myself included! It’s a sickness.

What about genealogy? Millions of folks spend countless hours and sometimes mega bucks researching their family history. Have you ever considered that each and every muscle car has a history as well? Its birth certificate is called a “build sheet,” and it followed the vehicle from conception to birth, and was squirted out the factory door lodged somewhere inside that car. Every inch of that vehicle was recorded by the factory, and in many cases that information is available in books, on the web or from professional sources that have access to old records from the assembly plants. You can document all the options, date of construction, assembly plant and even the dealer it was sold through. Engine codes, build date codes, color codes and option codes verify the authenticity and genealogy of the car. You may not have owned it all its life, but you certainly can check its gene pool.

Unlike some other members of a normal family, your muscle car won’t talk back. It does what you want it to do without complaining, goes in the garage when you want it to and isn’t constantly asking for money. It can be an ideal family member that doesn’t need company, sits quietly by itself, and, on top of all that, is usually appreciating in value. What a concept! It’s the one family member that constantly provides nothing but enjoyment and fun!

Can you feel the love? If you’re truly an enthusiast, owning a muscle car that you’ve always wanted, or replacing one you sold long ago, is a special life event. It’s falling in love with a piece of metal, which might seem totally outrageous to many, but the machine becomes part of your life. Unlike many other hobbies, your car is an animate object. It doesn’t just sit on a shelf or in a display case, it goes down the road, making cool noises and scaring old ladies. It provides hours of tinkering, polishing and bench racing enjoyment. It allows you to join a club and associate with others who share your passion, as well as always gives you something to do. It’s the perfect addition to any family and should be introduced as such. 🍀



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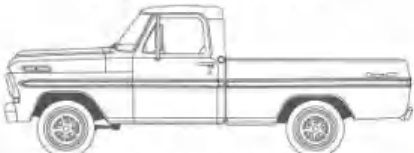
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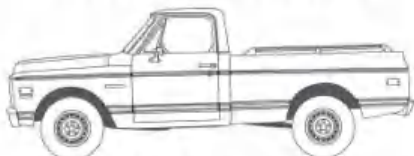
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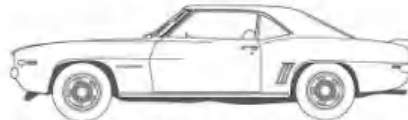
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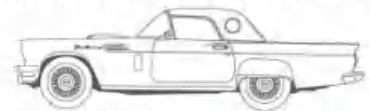
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